

*EPF 2001 191*

**ENVIRONMENTAL  
ASSESSMENT**

**WASTEWATER UTILITY SYSTEM PRIVATIZATION  
HOLLOMAN AIR FORCE BASE, NEW MEXICO**

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**FINAL**

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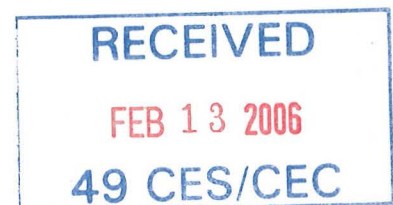
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Submitted to:

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**January 2006**



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# **FINDING OF NO SIGNIFICANT IMPACT FOR THE PRIVATIZATION OF THE WASTEWATER UTILITY SYSTEM AT HOLLOMAN AIR FORCE BASE (HAFB), NEW MEXICO**

**Proposed Action:** The Air Force is proposing to sell the entire HAFB wastewater collection and treatment system to a non-Air Force entity, granting real estate instruments as necessary to support the new owner of the system. The system includes all equipment, fixtures, right-of-way, and other improvements utilized in connection with the wastewater treatment system. The real property upon, under, or around the utility system would not be included. A Request for Proposals was issued by the General Services Administration on April 15, 2004.

The acquiring entity will be required to provide all necessary labor, management, supervision, permits, equipment, supplies, materials, transportation, and any other incidental services for the complete ownership, operation, maintenance, repair, upgrades, and improvements to the wastewater treatment system. The purpose of the action is to meet Congressional and Office of the Secretary of Defense (OSD) mandates regarding the privatization of non-combat military activities.

**Alternatives Analyzed:** Per the OSD guidance, the only alternative to the proposed action is the no action alternative. Under the no action alternative, the wastewater utility system would continue to be operated as an Air Force asset.

**Purpose of the Environmental Assessment:** The National Environmental Policy Act of 1969 requires Department of Defense installations to evaluate the potential environmental impacts of a proposed action and any associated alternative actions prior to the implementation of a proposed action. An Environmental Assessment (EA) has been prepared to address the potential for impacts associated with privatization of the wastewater utility system at HAFB. Additionally, the EA identifies the potential regulatory impacts that may result if the proposed action is implemented.

**Environmental Impacts of the Proposed Action:** The analysis of the EA concludes that, as long as the functioning of the HAFB wastewater collection and treatment system remains substantially the same, there will be no significant environmental impacts resulting from the proposed action. This determination is based on the following:

1. There will be no impact on the flora, fauna, endangered species, or natural resources in the project area.
2. There will be no impact on significant historical, archaeological, or cultural resources by the proposed action.
3. The proposed action will not adversely impact the social or economic structure of HAFB or the adjacent communities.

**Potential Regulatory Impacts:** The transfer of ownership of the HAFB wastewater collection and treatment system to a private or public entity may cause regulatory, economic, or mission impacts that have not been evaluated in this EA. Although outside the reasonable scope of this EA, these potential impacts should be carefully addressed prior to a final privatization decision and sale. More information should be provided on the potential impacts



regulatory, economic, and mission impacts when the bids and proposals are received from potential owners in the source selection process.

**Public Availability:** The EA has undergone an appropriate 30-day public comment period. This was in accordance with requirements specified in 32 Code of Federal Regulations Part 989.

**Conclusion:** I have determined that the proposed action would not constitute an action that significantly affects the quality of the human environment due to the findings listed above. Accordingly, an Environmental Impact Statement under the National Environmental Policy Act of 1969 is not required.

A handwritten signature in black ink, reading "Kurt A. Cichowski". The signature is fluid and cursive, with the first name "Kurt" being more prominent.

KURT A. CICHOWSKI  
Brigadier General, USAF  
Commander



**FINAL**

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WASTEWATER UTILITY SYSTEM PRIVATIZATION  
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Prepared for:

**U.S. Army Corps of Engineers  
Omaha District  
Contract No. DACA45-03-D-0023  
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Submitted to:

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**January 2006**

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# ENVIRONMENTAL ASSESSMENT WASTEWATER UTILITY SYSTEM PRIVATIZATION HOLLOMAN AIR FORCE BASE, NEW MEXICO

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## **ACRONYMS**

AFFF	Aqueous Film-Forming Foam
AFI	Air Force Instruction
BLM	Bureau of Land Management
BMP	Best Management Practice
BOD	Biochemical Oxygen Demand
BS	Bachelor of Science
CEQ	Council on Environmental Quality
CES/CEV	Civil Engineering Squadron/Environmental Flight
CFR	Code of Federal Regulations
CO	Carbon Monoxide
DOD	Department of Defense
DMR	Discharge Monitoring Report
DRMO	Defense Reutilization and Marketing Office
EA	Environmental Assessment
EIR	Economic Impact Region
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FONSI	Finding of No Significant Impact
FOTW	Federally Owned Treatment Works
FY	Fiscal Year
GSA	General Services Administration
HAFB	Holloman Air Force Base
INRMP	Integrated Natural Resources Management Plan
J.D.	Juris Doctor
LEPC	Local Emergency Planning Commission
LOC	Line of Concern
MGD	Million Gallons per Day
MS	Master of Science
MSDS	Material Safety Data Sheet
NAAQS	National Ambient Air Quality Standards
NDI	Non-Destructive Inspection
NEPA	National Environmental Policy Act
NMAAQs	New Mexico Ambient Air Quality Standards
NMED	New Mexico Environment Department
NO <sub>2</sub>	Nitrogen Dioxide
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O <sub>3</sub>	Ozone

OSD	Office of the Secretary of Defense
OSHA	Occupational Safety and Health Administration
OWS	Oil/water separator
PAO	Public Affairs Office
Pb	Lead
PM	Particulate Matter
POTW	Publicly Owned Treatment Works
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
RFP	Request for Proposals
ROI	Region of influence
SO <sub>2</sub>	Sulfur dioxide
SWMU	Solid Waste Management Unit
TIG	Tungsten Inert Gas
TRC	Total Residual Chlorine
TSS	Total Suspended Solids
USC	United States Code
USGS	United States Geological Survey
WSMR	White Sands Missile Range
WWTP	Wastewater Treatment Plant

## EXECUTIVE SUMMARY

Holloman Air Force Base (HAFB) is located approximately 8 miles west of Alamogordo, New Mexico, and occupies approximately 59,639 acres in Otero County (see Figures 1 and 2). HAFB was originally established on June 10, 1942, as the Alamogordo Army Air Field. The Alamogordo installation was renamed HAFB on January 13, 1948. Today, HAFB supports national security objectives and continues to serve at the forefront of military operations. HAFB also serves as the training center for the German Air Force's Tactical Training Center.

The Air Force is proposing to sell the entire HAFB wastewater collection and treatment system to a non-Air Force entity. The system proposed to be sold includes all equipment, fixtures, right-of-way, and other improvements utilized in connection with the wastewater treatment system. The real property upon, under, or around the utility system would not be included in the sale. The acquiring entity will be required to provide all necessary labor, management, supervision, permits, equipment, supplies, materials, transportation, and any other incidental services for the complete ownership, operation, maintenance, repair, upgrades, and improvements to the wastewater treatment system. The purpose of the action is to meet Congressional and Office of the Secretary of Defense (OSD) mandates regarding the privatization of non-combat military activities, including utilities. The decision to proceed with the privatization process was made in September 2000.

The only alternative that has been identified is the no action alternative where the wastewater utility system would continue to be an Air Force asset.

This Environmental Assessment (EA) analyzed 10 resource areas for both the proposed action and the no action alternative. These resource areas include: physiography, geology, and topography; soils; water resources; biological resources; air quality; land use; socioeconomic conditions; and cultural resources. The analysis of the EA concludes that, as long as the functioning of the HAFB wastewater collection and treatment system remains substantially the same, there will be no significant environmental impacts resulting from the proposed action.

Notably, the transfer of ownership of the HAFB wastewater collection and treatment system to a private or public entity may cause some yet undefined regulatory, economic, or mission impacts. Although outside the reasonable scope of this EA, these potential impacts must be carefully addressed prior to a final privatization decision and sale.

Wastewater Treatment Plants (WWTPs) are primarily regulated by the Clean Water Act (CWA) and the Resource Conservation and Recovery Act (RCRA). Federally Owned Treatment Works (FOTW) are eligible for the domestic sewage exclusion from the definition of solid waste under the requirements of RCRA. If the HAFB WWTP, which is currently a FOTW, were transferred to a private owner, the HAFB WWTP may lose this RCRA exemption. The HAFB WWTP, under private ownership, could be designated as a RCRA hazardous waste Treatment, Storage, or Disposal (TSD) facility. Accordingly, the new owner would be required to obtain a RCRA



permit under its own name and comply with more stringent treatment standards. If the HAFB WWTP were transferred to a public owner and operator meeting the definition of a Publicly Owned Treatment Works (POTW), HAFB may be required to implement National Pretreatment Standards.

The CWA requires the new owner of the WWTP to operate under a National Pollutant Discharge Elimination System (NPDES) permit under its own name. However, HAFB would not necessarily be relieved of its NPDES permit responsibilities. The Director of the EPA maintains some control over the users of privately-owned treatment works and Publicly Owned Treatment Works (POTWs). HAFB may be required to be a co-permittee on the NPDES permit, operate under a separate NPDES permit, or submit a separate application for a NPDES permit. These requirements could increase the regulatory burden on the WWTP and HAFB, a result that would counteract the intent of the Department of Defense's utility privatization initiative.

There are potential economic risks associated with meeting NPDES permit standards while adjusting to wastewater quality or quantity variations. The new owner would identify conditions that may affect WWTP operations and cause permit violations. This includes the minimum and maximum water quality and water quantity requirements for discharge from the base to the wastewater collection system. The owner could prevent disruptive discharges with a system much like municipal sewer ordinance codes, with fines, cost recovery, court action, or termination of service. Meeting these restrictions could require new failsafe diversion systems, facility upgrades, or new pretreatment facilities for HAFB. Future changes to the missions at HAFB could require new negotiations as the owner could impose or maintain restrictions on HAFB that ultimately constrain mission changes or expansions.

More information may be provided on the aforementioned potential regulatory, economic, and mission impacts when the bids and proposals are received from potential private or public owners in the source selection process. Clearly, these proposals should be evaluated for regulatory, economic, and technical feasibility before HAFB moves forward and transfers ownership of the wastewater collection and treatment system. Beyond the environmental areas addressed by this EA, there must be careful consideration of all potential impacts that are contrary to the intended purposes of the Department of Defense's privatization initiative, especially resulting mission impacts and constraints on HAFB.

Based on the proper scope of this EA, the implementation of the proposed privatization action will not result in a significant impact on the quality of the human or natural environment. Issuance of a Finding of No Significant Impact (FONSI) is recommended if the wastewater utility system is to be operated in substantially the same manner by a private or public entity. However, the potential regulatory and economic impacts resulting from the WWTP's loss of FOTW status should be carefully considered prior to a final decision on the privatization of the utility system.

# **1 PURPOSE OF AND NEED FOR ACTION**

## **1.1 Proposed Action**

The Air Force is proposing to sell the entire HAFB wastewater collection and treatment system to a non-Air Force entity, granting real estate instruments as necessary to support the new owner of the system. The system to be sold includes all equipment, fixtures, right-of-way, and other improvements utilized in connection with the wastewater treatment system. The real property upon, under, or around the utility system would not be included. The acquiring entity will be required to provide all necessary labor, management, supervision, permits, equipment, supplies, materials, transportation, and any other incidental services for the complete ownership, operation, maintenance, repair, upgrades, and improvements to the wastewater treatment system.

According to the OSD guidance, the preferred alternative is to sell the wastewater utility system to a private or public non-Air Force entity, if a responsive and responsible purchaser is approved. The decision to proceed with the privatization process was made in September 2000.

## **1.2 Need for Proposed Action**

The purpose of the action is to meet Congressional and OSD mandates regarding the privatization of non-combat military activities. Further, this privatization action is intended to increase efficiency, decrease cost, and allow Air Force personnel to concentrate on core responsibilities. The end goal of the privatization process is the sale of the utility assets to a non-Air Force entity, which would result in that entity holding all environmental permits for operation of the wastewater utility system.

The intent of privatization is that, through the transfer of environmental permits, the environmental liability currently carried by the Air Force would be reduced. It should be noted however, that this transfer of environmental permits to a non-Air Force entity does not necessarily ensure that HAFB will not be impacted by potential environmental compliance issues.

The regulatory compliance issues associated with the proposed privatization action are briefly discussed in Sections 1.7 and 2.2.1.1 of this EA.

## **1.3 Objectives of the Proposed Action**

Privatization of base utilities is intended to increase efficiency, decrease cost, and allow Air Force personnel to concentrate on core responsibilities. The end goal of the privatization process is the outright sale of the utility assets to private entities, which means that the private owner will hold all applicable permits for operation of the utility.



## **1.4 Relevant Plans, Laws, Regulations, and Other Documents**

This EA has been prepared in accordance with the requirements of Air Force Instruction (AFI) 32-7061, *Environmental Impact Analysis Process*, July 6, 1999, as codified in 32 Code of Federal Regulations (CFR) Part 989; NEPA of 1969 (Public Law 91-190, 42 United States Code (U.S.C.) 4321-4347), and its implementing documents required for compliance with the CEQ Regulation, 42 CFR Part 4321, 40 CFR Part 1500, and 32 CFR Part 651. Additional associated laws and regulations pertinent to air and water quality, and biological and cultural resources, were also considered during the preparation of this EA.

Relevant policies and procedures in other documents specific to HAFB have also been considered in the preparation of this EA. These documents are briefly described below.

### **1.4.1 HAFB Integrated Natural Resources Management Plan**

The *Holloman Air Force Base Integrated Natural Resources Management Plan* (INRMP) (Reiser, et al., 2000) for plan period January 2000 through January 2005, was reviewed during the preparation of this EA. The INRMP was designed to facilitate adaptive management policies to correspond to the changing natural environmental conditions while integrating base mission goals and strategic plans.

### **1.4.2 WWTP Chlorine Gas Process Risk Management Plan**

A program aimed at preventing the release of chlorine is currently in place at the wastewater treatment plant (WWTP) at HAFB. This prevention program is contained in the *Risk Management Plan, Five Year Update, Wastewater Treatment Plant, Chlorine Gas Process* (Environmental Resources Management, Inc., 2004). The major objective of this prevention program is the implementation of a management system to prevent releases of chlorine, especially into locations that could expose the public and others to serious hazards.

### **1.4.3 Industrial Wastewater Pretreatment Studies**

Documents detailing the types, sources, and current and potential pretreatment methods of industrial wastewater at HAFB were reviewed during the preparation of this EA. The specific documents that were reviewed were the *Industrial Wastewater Pretreatment Study Final Phase II Report* and the *Industrial Wastewater Pretreatment Study Phase III Report Customer Concept Document* (Ecology & Environment, Inc., February and March, 1999, respectively).

## **1.5 Decisions That Must Be Made**

The decision that the Air Force must make is whether to privatize the wastewater utility system at HAFB.



## 1.6 Scope of this Environmental Assessment

The proposed action and alternative addressed in this EA reflect the results of interviews with HAFB officials, federal and State agencies, and other interested parties, as well as on-site assessments conducted in October 2004. Other documents reviewed as part of this EA include the HAFB *Risk Management Plan, Five Year Update, Wastewater Treatment Plant, Chlorine Gas Process* (Environmental Resources Management, Inc., 2004), the *Integrated Natural Resources Management Plan* (Reiser, et al., 2000), land transfer records between the Bureau of Land Management (BLM) and the Air Force, and the current National Pollutant Discharge Elimination System (NPDES) Permit (No. NM0029971) and recently submitted NPDES permit application.

### 1.6.1 History of the Planning and Scoping Process

The decision to proceed with the privatization process was made in September 2000. The decision whether to privatize is expected to be made during February 2006.

This EA describes the proposed action and the environmental setting, and discusses potential environmental impacts of the proposed action. This EA also identifies potential regulatory and/or permitting issues that may arise as a result of the privatization action. Further, this EA provides an objective appraisal of both the potential positive and negative impacts of the proposed action and the no action alternative.

A scoping letter describing the nature of the proposed action was sent to applicable federal, State, tribal, and local agencies on December 20, 2004 (see Appendix B). The scoping letter was sent as a request for the recipients to address any questions, concerns, or provide any advisory information whether it be environmental, cultural, or socioeconomic issues, that should be considered in the EA. Appendix C contains the responses received from the recipients of the scoping letter, other organizations that had input into the document and response from the public after reviewing this EA. The public notice requesting input into this EA is located in Appendix D.

### 1.6.2 Issues Studied

Issues studied in detail included those that are required to be addressed under NEPA, such as biological, cultural, and socioeconomic resources. These and other issues identified by NEPA are discussed in detail throughout the body of this report. Additionally, potential regulatory, economic, and mission impacts have been identified for further evaluation.

Wastewater Treatment Plants (WWTPs) are primarily regulated by the Clean Water Act (CWA) and the Resource Conservation and Recovery Act (RCRA). Federally Owned Treatment Works (FOTW) are eligible for the domestic sewage exclusion from the definition of solid waste under the requirements of RCRA. If the HAFB WWTP is transferred to a private or public owner, the FOTW exemption would no longer apply. Additionally, if the HAFB WWTP were transferred to

a public owner and operator meeting the definition of a Publicly Owned Treatment Works (POTW), HAFB may be required to implement National Pretreatment Standards.

The CWA requires the new owner of the WWTP to obtain a new NPDES permit under its own name. However, HAFB would not necessarily be relieved of its NPDES permit responsibilities.

Meeting any new restrictions could require new failsafe diversion systems, facility upgrades, or new pretreatment facilities. Future changes to the mission at HAFB could require new negotiations as the owner's discharge restrictions on HAFB could constrain mission changes or expansions at HAFB.

These potential regulatory, economic, and mission impacts are further discussed in Section 1.7. Possible means for the new owner of the WWTP to address these issues are discussed in Section 2.2.2.1

## **1.7 Applicable Regulations, Permits, and Other Coordination Requirements**

### **1.7.1 Permits**

#### **1.7.1.1 National Pollutant Discharge Elimination System**

The Air Force currently holds NPDES permit number NM0029971, a direct discharge permit for the WWTP that was issued by Environmental Protection Agency (EPA), Region 6. The CWA would require the new owner of the WWTP to operate under a NPDES permit in its own name. Changing the name of the permittee would require either modification of the existing permit or revocation of the current permit and reissuance of a new permit. The director of the EPA must be notified to accomplish these actions. The new or modified permit may incorporate new and stricter requirements as deemed necessary by the EPA under the CWA.

Even if the Air Force transfers ownership of the utility system, HAFB would not necessarily be relieved of its NPDES permit responsibilities. According to 40 CFR 122.44(m), the director of the EPA may maintain some control over the users of privately-owned treatment works and POTWs. The director may issue a permit under the new owner's name and include conditions applicable to HAFB that must be met to obtain compliance with the requirements of the permit. Also, HAFB may be required to be a co-permittee on the NPDES permit, operate under a separate NPDES permit, or submit a separate application for a NPDES permit. These conditions could increase the regulatory burden on the WWTP or impose separate pretreatment requirements on HAFB.

#### **1.7.1.2 Multi-Sector General Permit**

The WWTP is currently a sector in the HAFB Multi-Sector General Permit for stormwater discharges associated with industrial activities. The WWTP would remain covered under this permit after privatization. As such, the prospective owner will have to coordinate with HAFB on stormwater issues.



### **1.7.1.3 Title V Air Permit**

The wastewater treatment facility is not specifically listed as an individual source in the Title V Operating Permit. Any incidental air pollutant discharges of volatile organic compounds and hazardous air pollutants from the wastewater treatment facility are reported as part of overall Holloman Air Force Base facility air pollutant discharges. The proposed privatization will not impact the present HAFB Title V Air Permit or give rise to additional air emissions permitting at the WWTP.

### **1.7.1.4 Resource Conservation and Recovery Act**

The materials passing through the wastewater utility system are currently exempted from the requirements of RCRA. Under 40 CFR 261.4(a)(1), "any mixture of domestic sewage and other wastes that passes through a sewer system to a POTW for treatment" are exempt from the definition of solid waste. The Federal Facility Compliance Act of 1992 amended this statutory exclusion to apply to "any solid or dissolved material introduced by a source into a FOTW" (RCRA Section 3023(a)). Therefore, the materials currently passing through the WWTP are exempt from RCRA Subtitle C regulation. The HAFB WWTP is currently classified a FOTW.

If the WWTP were to become a privately-owned treatment works, this RCRA exemption would no longer apply. The WWTP could be considered a RCRA Treatment, Storage, or Disposal Facility (TSDF) and be required to obtain RCRA permits and maintain compliance records. The treatment standards imposed on a TSDF could be more stringent than those required under the current NPDES permit. Additionally, RCRA's cradle-to-grave liability would leave HAFB responsible for the owner's disposal of any wastewater containing hazardous wastes.

## **1.7.2 Potential Pretreatment Requirements**

The HAFB wastewater treatment system is designed to handle and treat the current domestic and non-domestic waste streams being discharged to the system. Wastewater discharges from non-domestic facilities include, but are not limited to, those from aircraft washing facilities, corrosion control facilities, machine and maintenance shops, medical research and analytical laboratories, the Base Exchange, laundry facilities, eateries, car wash, etc. Specific non-domestic wastewater discharges identified by HAFB include:

- Petroleum oil/fuel
- Vegetable oil, grease, or animal oil
- X-ray processing
- Floor washing
- Boiler/chiller systems
- Vehicle, aircraft, and equipment washing
- Radiator test tanks
- Glass grinding coolant
- Aqueous film-forming foam (AFFF)
- Vapor extraction remediation system
- Aerospace fuels canister rinsing

- Non-destructive inspection (NDI) – Liquid fluorescent penetrant
- Photoprocessing
- Tungsten inert gas (TIG) Welder coolant
- Heat treatment furnace coolant

Under normal circumstances, there are no plant upsets or system failures associated with the present waste streams. However, the operation of these processes would be outside the control of the WWTP owners and could cause upsets to the WWTP's operation. Future mission changes and the associated changes in discharges would also be out of the control of WWTP owners.

Similar issues are addressed by the national pretreatment program under the CWA, implemented by 40 CFR Part 403. This requires that industrial facilities pretreat pollutants to the extent that these pollutants interfere with, pass through, or are otherwise incompatible with the operations of a POTW. Contributors to privately-owned treatment works are not subject to these pretreatment requirements, but instead must comply with the NPDES requirements imposed by the director of the EPA under 40 CFR 122.44(m) (see Section 1.7.1.1). Since privately-owned treatment works are not subject to the CWA's pretreatment standards, they are open to regulation under RCRA (see Section 1.7.1.4).

Pretreatment could also present economic risks associated with meeting NPDES permit standards. The owner could identify conditions that may affect WWTP operations and cause permit violations (see Section 2.2.1.1). This includes the minimum and maximum water quality and water quantity requirements for discharge to the wastewater utility system. The owner could prevent disruptive discharges with a system much like municipal sewer ordinance codes, with fines, cost recovery, court action, or service termination. Meeting these restrictions could require new Best Management Practices (BMPs), failsafe diversion systems, facility upgrades, or new pretreatment facilities. Future mission changes or expansions at HAFB could be constrained by restrictions imposed by the private or public owner if such changes or expansions entailed changes in the content or quantity of the waste stream discharged from HAFB. The nature and extent of contractual obligations proposed by individual bidders should be examined closely prior to entering into a contract.

### **1.7.3 Licenses/Entitlements**

There are no licenses or entitlements that are applicable to the proposed privatization action analyzed in this EA.

### **1.7.4 Coordination Requirements**

Currently, the HAFB Fire Department would respond to emergencies associated with the operation of the wastewater utility system. Further, there is a formal mutual aid relationship between HAFB and the City of Alamogordo response organizations. Additionally, HAFB is represented on the Otero County Local Emergency Planning Commission (LEPC). If the wastewater utility system becomes privatized, the new operator would have to coordinate with these and/or other acceptable emergency responders in the event of an emergency.



## 2 PROPOSED ACTION AND ALTERNATIVE

### 2.1 Summary of Proposed Action and Alternative

The Air Force is proposing to sell the entire HAFB wastewater collection and treatment system to a non-Air Force entity.

- *Proposed Action:* Sell the entire HAFB wastewater collection and treatment system to a non-Air Force entity, granting real estate instruments as necessary to support the new owner of the system.
- *No Action Alternative:* Do not sell the HAFB wastewater collection and treatment system to a non-Air Force entity, and continue to operate the wastewater collection and treatment system as an Air Force asset.

The proposed action and no action alternative are discussed in further detail below.

### 2.2 Proposed Action: Sell the Wastewater Utility System to a Non-Air Force Entity

The proposed action consists of the sale of the entire HAFB wastewater collection and treatment system to a non-Air Force entity, granting real estate instruments as necessary to support the new owner of the system. The system includes all equipment, fixtures, right-of-way, and other improvements utilized in connection with the wastewater treatment system (as defined in United States Air Force Utilities Privatization, Request for Proposal (RFP) GS-00P-04-BSC-0291, *Wastewater Utility System, Holloman Air Force Base, New Mexico* (15 April 2004) issued by the General Services Administration (GSA)). The real property upon, under, or around the utility system would not be included. The acquiring entity will be required to provide all necessary labor, management, supervision, permits, equipment, supplies, materials, transportation, and any other incidental services for the complete ownership, operation, maintenance, repair, upgrades, and improvements to the wastewater treatment system. Figures 3 and 4 show the locations of the wastewater utility system north of the WWTP and the wastewater collection lines, respectively. The approximate locations of the wastewater effluent lines and where they discharge into Lake Holloman and Lagoon G are detailed on Figure 5.

Photographs of relevant facilities and locations on the HAFB installation are located in Appendix A.

#### 2.2.1 Principal Actions of the Proposed Action

Principal actions involved in the privatization of the wastewater utility system are addressed below.

### 2.2.1.1 Owner Responsibilities

Expectations for potential owners can be located in the RFP for this project. Prospective offerors' proposals must detail how they plan to operate and maintain the wastewater system. These plans must be carefully considered to ensure all potential environmental, economic, regulatory, and mission impacts have been addressed.

Section C.3.1 of the RFP states that the "contractor shall be responsible for funding all capital improvements required to acquire, maintain, and operate its utility system(s) in a safe and reliable condition and to meet all requirements listed herein". Section C.7 details a Service Interruption/Contingency Plan to identify and address possible causes for service interruption. These requirements address the need for a properly functioning wastewater system, but do not state that the systems function must remain unchanged. Any potential changes in operations must be carefully considered.

Prior to the sale, the contractor must provide an Operational Transition Plan and a Quality Management Plan. These plans address the turnover of permits and clearly define the responsibilities of the Government, Contractor, disposal facilities, and regulatory bodies. Additionally, the contractor is required to obtain a NPDES permit 180 days prior to the sale of the wastewater system. These plans, permits, and the resulting responsibilities must be carefully considered prior to sale of the system.

Section J4.13 of the RFP addresses the change from a FOTW to a privately-owned treatment works. The offeror is required to obtain a declaratory ruling from an appropriate agency that determines the status of the WWTP after the sale. The Technical Proposal must clearly outline how waste generated would be treated under RCRA and how any additional costs would be mitigated. Any capital upgrades necessary for pretreatment or the management of RCRA hazardous waste must be identified.

Section J4.3 of the RFP discusses contractor required restrictions on discharges to the wastewater system. The owner would identify conditions that may affect WWTP operations and cause permit violations. This includes the minimum and maximum water quality and water quantity requirements for discharge to the wastewater collection system. These restrictions should be managed in such a way as to avoid constraints to future mission changes.

The operator must comply with all installation policies and procedures including installation-specific spill contingency plans and applicable hazardous material and waste minimization programs.

How the contractor proposes to address these issues will not be known until the bidding process is completed. Proposals should be evaluated for regulatory, economic, and technical feasibility before the Air Force transfers ownership of the wastewater utility system. In addition to this EA, there must be careful consideration of all regulatory, economic, and mission impacts that may be contrary to the underlying purposes of the Department of Defense's privatization mandate.



### **2.2.1.2 Mitigation and Monitoring**

Mitigation generally includes avoiding an effect altogether by stopping or modifying an action, minimizing an effect by limiting the degree or magnitude of an action and the activities associated with its implementation, and rectifying an effect by repairing, rehabilitating, or restoring the affected environment. Mitigation may also involve reducing or eliminating an effect over time by preservation and maintenance operations during the life of an action or compensating for an effect by replacing or providing substitute resources or environments.

There are specific regulatory and plant interference issues related to non-domestic discharges to the WWTP that have the potential to affect WWTP operations. These are discussed in Section 1.7.2.

No mitigation measures have been identified in conjunction with the proposed action. However, prospective bidders may condition their privatization proposals on HAFB undertaking certain actions, improvements, or commitments either in the form of pretreatment or the implementation of best management practices. Any conditions to privatization proposals should be scrutinized closely to assess the impact on cost and mission readiness.

### **2.2.2 Past Relevant Actions**

There are no known past actions that are relevant to or that could impact the proposed action at this time.

### **2.2.3 Past Relevant Actions Not Part of the Proposed Action**

The land transfer agreement between the Air Force and the BLM is a past action that is relevant to the Proposed Action. The land specified consists of approximately 1,262 acres that was transferred to the Air Force for the construction of new evaporation ponds to support a wastewater treatment facility. Prior to transfer, this land had been used by the public for recreational purposes including wildlife viewing as it serves as important habitat for numerous bird species. The land transfer took effect on June 12, 1996, and as part of the transfer, the Air Force agreed to allow for public access to the transferred land for continued recreational uses.

Collaboration between various private and government agencies has resulted in several Memorandum of Understandings and Memorandum of Agreements (MOU/MOAs). These MOU/MOAs establish certain land/resource management criteria and BMPs to be followed. Natural resource management criteria and BMPs can be found in the 1996 WWTP Environmental Assessment and the current Integrated Natural Resources Management Plan for HAFB.

As a result of the land transfer and established MOU/MOAs, effluent of suitable quality and quantity to support wildlife habitat must be discharged to Lake Holloman, Lagoon G, and HAFB's unnamed jurisdictional wetlands. The potential owner would need to maintain a NPDES permit that provides a flexible discharge schedule in order to respond to climatological conditions, pest management, or other natural resource management requirements.

### **2.2.4 Reasonably Foreseeable Actions Not Part of the Proposed Action**

There are currently no reasonably foreseeable actions that are relevant to or that could impact the proposed action.

## **2.3 No Action Alternative**

The only known alternative to the proposed action is the no action alternative where the wastewater system would continue to be operated as an Air Force asset.

### **2.3.1 Principal Actions of the No Action Alternative**

The no action alternative is to continue operation of the wastewater utility system as an Air Force asset. Currently, the wastewater utility system is owned by the Air Force and is operated by an outside contractor. As part of this current operating agreement, all environmental permits relating to the wastewater utility system are held by HAFB.

### **2.3.2 Mitigation and Monitoring**

Under the no action alternative, no mitigation or monitoring in addition to what is currently performed will be required.

### **2.3.3 Past Relevant Actions**

There are no known past actions that are relevant to or that could impact the no action alternative at this time.

### **2.3.4 Present Relevant Actions Not Part of the Proposed Action**

There are no known present actions that are relevant to or that could impact the no action alternative at this time.

### **2.3.5 Reasonably Foreseeable Relevant Actions Not Part of the Proposed Action**

There are currently no reasonably foreseeable actions that are relevant to or that could impact the no action alternative.

## **2.4 Process Used to Develop the No Action Alternative**

The no action alternative was identified by OSD.



### **2.4.1 History and Development Process of the No Action Alternative**

The no action alternative was identified by OSD.

### **2.4.2 Alternatives Eliminated from Detailed Study**

Only the proposed action and the no action alternative were considered during the preparation of this EA.

## **2.5 Summary Comparisons**

### **2.5.1 Summary Comparison of Project Activities**

The proposed action or privatization of the wastewater utility system involves the sale of the entire HAFB wastewater collection and treatment system (as defined in United States Air Force Utilities Privatization, Request for Proposals GS-00P-04-BSC-0291, *Wastewater Utility System, Holloman Air Force Base, New Mexico* (15 April 2004)) to a non-Air Force entity, granting real estate instruments as necessary to support the new owner of the system. The acquiring entity will be required to provide all necessary labor, management, supervision, permits, equipment, supplies, materials, transportation, and any other incidental services for the complete ownership, operation, maintenance, repair, upgrades, and improvements to the wastewater treatment system.

The only alternative to the proposed action is the no action alternative where the wastewater utility system would continue to be operated as an Air Force asset. Currently, the wastewater utility system is owned by the Air Force and is currently operated under contract. As part of this current operating agreement, all environmental permits relating to the wastewater utility system are held by HAFB.

### **2.5.2 Summary Comparison of Predicted Environmental Effects**

The implementation of the proposed action would result in the new operator assuming all necessary environmental permits associated with the operation of the wastewater utility system. As long as the new owner operates the HAFB wastewater collection and treatment system in substantially the same manner as done presently, no significant positive or negative environmental effects are anticipated with the implementation of the proposed action. However, there is the potential for regulatory and economic impacts to HAFB if additional industrial waste stream discharge controls are required (see Section 1.7.4).

The implementation of the no action alternative would not result in any significant positive or negative environmental effects.

The table below presents a summary of the potential environmental effects on each resource. Based on this study, the preferred action is identified as being the proposed action where the wastewater utility system would be privatized. It is concluded that the preparation of an Environmental Impact Statement is not warranted. Therefore, it is recommended that a FONSI be issued.

**Table 2-1. Summary of Potential Environmental Effects**

Resource	Potential Effect	
	Proposed Action	No Action
Physiography/Geology/Topography	None	None
Soils	None	None
Land Use	None	None
Air Quality	None	None
Water Resources	None	None
Biological Resources	None	None
Cultural Resources	None	None
Socioeconomic Conditions	None	None

## **2.6 Identification of the Preferred Alternative**

The preferred alternative is to sell the wastewater utility system to a private or public non-Air Force entity.

## 3 AFFECTED ENVIRONMENT

### 3.1 Introduction

This Chapter describes those resources that may be affected by implementation of the proposed action. Additionally, where applicable, this Chapter describes existing environmental factors that may affect project implementation and action, such as the presence of contaminated soils or the presence of underground storage tanks.

### 3.2 Description of Relevant Facilities and/or Operations

#### 3.2.1 Wastewater Utility System

##### 3.2.1.1 Wastewater Collection System

The wastewater utility system includes all equipment, fixtures, right-of-way, and other improvements utilized in connection with the wastewater treatment system (as defined in United States Air Force Utilities Privatization, RFP GS-00P-04-BSC-0291, *Wastewater Utility System, Holloman Air Force Base, New Mexico* (15 April 2004)). The real property upon, under, or around the utility system would not be included.

Per the RFP for privatization, the HAFB wastewater collection system consists of all appurtenances physically connected to the collection system, from the facility interface point at each location served by the system, extending to and including the wastewater treatment facility. The facility interface (demarcation) points are typically at the outlet of a facility's oil/water separator, at the facility sewer clean-out point, a facility specific service manhole inlet, or at a line five feet out from the facility.

Specifically excluded from the wastewater collection system privatization are the following:

1. Lift station in the basement of Building 1265
2. Lift Station #17 near Building 823 and Lift Station #22 near Building 812
3. All Oil/Water Separators (OWS) and sanitary septic tanks (with associated lateral fields)
4. The wastewater collection system lines in the military family housing areas on base

Wastewater collection and treatment for HAFB is provided for most of the base facilities. The sewer collection system contains a series of gravity collection main, lift stations, and force mains which route the wastewater to the base WWTP (the WWTP is discussed in detail below).

Septic systems serve the remaining base population. It is estimated that approximately 30 septic tanks remain in remote areas of the base. Per the RFP, these systems require little to no maintenance. The base also includes numerous OWS that are part of the industrial pretreatment system (consisting of OWS and AFFF ponds). The septic tanks, lateral fields, and OWS are not included in the privatization effort.



### 3.2.1.2 Wastewater Treatment Plant

The existing WWTP began operation in July 1996 and includes influent pumping, screening, grit removal, flow measurement, aeration, secondary clarification, chlorine contact for effluent disinfection, dechlorination (through the use of sulfur dioxide (SO<sub>2</sub>)), and effluent flow measurement. Solids handling facilities include aerobic sludge digesters and paved sludge drying beds. A septage disposal basin for the acceptance of waste from pumped septic tanks and/or portable toilets on the installation is also located at the WWTP. The wastewater treatment facility was designed for an average flow of 1.5 million gallons per day (MGD).

The WWTP is currently operated under contract and was designed to treat domestic wastewater generated from offices, commercial facilities, restaurants, and family housing units. However, certain non-domestic wastewater flows at HAFB are directed to the WWTP. As a result of pretreatment, such as OWS and AFFF ponds, and pollution prevention practices, the effect of these sources on the performance of the wastewater treatment facility is minimal. Some of the specific activities, systems, and/or materials that result in non-domestic discharges include:

- Petroleum oil/fuel
- Vegetable oil, grease, or animal oil
- X-ray processing
- Floor washing
- Boiler/chiller systems
- Vehicle, aircraft, and equipment washing
- Radiator test tanks
- Glass grinding coolant
- AFFF
- Vapor extraction remediation system
- Aerospace fuels canister rinsing
- Non-destructive inspection (NDI) – Liquid fluorescent penetrant
- Photoprocessing
- Tungsten inert gas (TIG) Welder coolant
- Heat treatment furnace coolant

There are approximately 30 to 40 OWS on base, which are maintained by the Air Force and are not considered for privatization. It is assumed that these units will continue to be properly operated and maintained, and that the influent wastewater quality will not be altered.

EPA Region 6 has issued HAFB NPDES Permit No. NM0029971. The Permit became active on March 1, 2000, and expires February 29, 2005. Under the permit, effluent from the WWTP is discharged to Lagoon G (via a 6" forcemain), Lake Holloman (via a 24" gravity line), or the unnamed jurisdictional wetlands.

### 3.2.2 Hazardous Materials and Hazardous Waste

Hazardous materials and waste at HAFB are managed in accordance with the New Mexico Hazardous Waste Management Regulations (New Mexico Administrative Code, 2000) and Air



Force policy and program requirements as described in AFI 32-7086 and AFI 32-7042. Additionally, pollution prevention and spill response procedures are in place to address the management of hazardous materials and to respond to accidents. Each user of hazardous materials on the installation is responsible for the safe storage and handling of those materials. Further, Material Safety Data Sheets (MSDSs) are required to be submitted to 49 Civil Engineering Squadron Environmental Flight (CES/CEV) for evaluation and approval for use on the installation.

The 49 CES/CEV oversees the management of hazardous waste accumulation points. Hazardous wastes produced on the installation are profiled by the 49 CES/CEV Hazardous Waste Program Manager. Disposal is managed through the Defense Reutilization and Marketing Office (DRMO).

Non-government entities that occupy facilities on HAFB that use hazardous materials and/or generate hazardous wastes are responsible for the tracking of such materials, proper hazardous waste identification, storage, transportation, and disposal, and for the implementation of procedures intended to reduce the volume and toxicity of the hazardous waste generated.

### **3.3 Description of Relevant Affected Resources**

#### **3.3.1 General Site Description**

HAFB is located in Otero County, New Mexico, approximately 8 miles west of the City of Alamogordo. The installation occupies approximately 59,639 acres. HAFB was originally established on June 10, 1942, as the Alamogordo Army Air Field. The Alamogordo installation was renamed HAFB on January 13, 1948. Today, HAFB supports national security objectives and continues to serve at the forefront of military operations. Additionally, HAFB serves as the training center for the German Air Force's Tactical Training Center.

#### **3.3.2 Physiography, Geology, and Topography**

HAFB is located in the Basin and Range physiographic province. Distinguishing features of this physiographic province are narrow, rugged, and generally north/south trending parallel ranges of mountains interspersed with internally drained basins. These landscapes were formed by Rocky Mountain orogenic processes during the late Pennsylvanian or early Permian period. HAFB is located in the Tularosa Basin within the Mexican Highland Section of the Chihuahuan Desert environmental zone that is dominated by a semi-arid climate.

The topography of HAFB is relatively level with elevations ranging from approximately 4,050 feet to 4,150 feet above mean sea level.

#### **3.3.3 Soils**

Two soil types were identified on the installation. The main soil type is the Holloman-Gypsum land-Yesum complex, 0 to 5 percent slopes. The other soil type is Mead silty clay loam, 0 to 1 percent slopes. This soil type is located only across the main drainage area for the installation.

The Holloman-Gypsum land-Yesum complex, 0 to 5 percent slopes soil consists of large areas of shallow and deep, well drained soils and areas of exposed gypsum. The Holloman soil makes up about 35 percent of the complex. Typically, the surface layer is light brown very fine sandy loam about 3 inches thick. The upper 13 inches of the substratum is pink very fine sandy loam that is very high in gypsum. Below that, the substratum is white gypsum to a depth of more than 60 inches. This soil is calcareous and mildly alkaline to moderately alkaline throughout. Permeability is moderate, and available water capacity is very low.

Gypsum land makes up about 30 percent of the Holloman-Gypsum land-Yesum complex, 0 to 5 percent slopes. Typically, less than 1 inch of very fine sandy loam overlies soft to hard, white gypsum. The deep Yesum very fine sandy loam makes up about 20 percent of the complex. Typically, the surface layer is light brown very fine sandy loam about 3 inches thick. The upper 9 inches of the substratum is light brown fine sandy loam that is very high in gypsum. Below that, the substratum is pink very fine sandy loam to a depth of more than 60 inches. The soil is calcareous throughout and is mildly alkaline. Permeability is moderate, and available water capacity is moderate. Many fine gypsum crystals are found throughout the profile.

The soil type located across the main drainage area for the installation is Mead silty clay loam, 0 to 1 percent slopes. This deep, poorly drained, nearly level soil is on outer fringes of alluvial fans. This soil formed in fine textured alluvium over lacustrine lake sediment. It is very high in salt content because of periodic flooding and poor drainage. Slopes are smooth and concave. Typically, the surface layer is reddish brown silty clay loam and clay loam about 5 inches thick. The substratum, to a depth of 48 inches, is light reddish brown clay that has a high content of salts. Below that, the substratum is lacustrine material of variable texture and color to a depth of more than 60 inches. Included with this soil are areas of Holloman soils and Gypsum land along the margins of the unit of steep, short gully sides and knolls. These inclusions make up about 15 percent of the map unit for this soil type. Individual areas are generally smaller than 10 acres. This soil is moderately calcareous throughout and is moderately to strongly alkaline. It has a layer of salt that is more soluble than gypsum. Permeability is very slow, and available water capacity is low.

### **3.3.4 Land Use**

HAFB, occupies approximately 59,639 acres in Otero County, New Mexico, and is located approximately 8 miles west of the City of Alamogordo. Nearby communities include High Rolls, La Luz, Tularosa, and Cloudcroft, New Mexico.

Approximately 75 percent of the land in Otero County is controlled by the federal government. The remaining 25 percent is almost equally divided between State and private land use. There are no formal zoning or land use regulations in Otero County. The City of Alamogordo has concurrent jurisdiction with Otero County for subdivision regulations within 3 miles of the city limits.

Scattered commercial development is located east of HAFB along U.S. Highway 70/82, between the installation and the city limits of Alamogordo. Land use in this area is characterized by the Alamogordo/White Sands Regional Airport, and various commercial, light industrial, and



residential developments. Land use to the north, south, and west of the installation primarily consists of undeveloped, open range land. The majority of this range land is encompassed by White Sands Missile Range (WSMR), a military weapons research and testing area that is operated by the U.S. Army and is closed to the public. Also located west of the installation is White Sands National Monument, a recreational area that is open to the public.

### **3.3.5 Air Quality**

Federal ambient air quality primary and secondary standards are defined in 40 CFR §50.2b as follows:

“National primary ambient air quality standards define levels of air quality which the Administrator judges are necessary, with an adequate margin of safety, to protect the public health. National secondary ambient air quality standards define levels of air quality which the Administrator judges necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant” (1976).

EPA has established federal air quality standards for carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), particulate matter less than 10 microns in diameter (PM<sub>10</sub>), particulate matter less than 2.5 microns in diameter (PM<sub>2.5</sub>), and SO<sub>2</sub>. These standards are termed the National Ambient Air Quality Standards (NAAQS) and may not be exceeded more than once a year, except annual standards, which may never be exceeded. The State of New Mexico has developed the New Mexico Ambient Air Quality Standards (NMAAQS) and has also adopted the NAAQS to regulate some pollutant levels in New Mexico. None of the NAAQS or the NMAAQS have consistently been exceeded at HAFB.

HAFB is located in the State of New Mexico Air Quality Control Region 6. Particulates (primarily windblown dust) are the only air pollutants of concern in the HAFB area. While ambient pollutant concentrations at HAFB are not monitored, HAFB generally has very low concentrations of air pollutants because of good atmospheric dispersion conditions and the absence of continuous emissions. HAFB is in attainment, meaning that no pollutant concentrations exceed the designated federal and State air quality standards. Presently, HAFB and the surrounding areas are in attainment for all of the NAAQS.

### **3.3.6 Water Resources**

#### **3.3.6.1 Climatology and Hydrology**

The climate in the project area is typical of the southwestern deserts. It is generally warm, dry, and sunny, with hot summers and mild winters. There is a pronounced peak in the rainfall levels in the summer months. Annual rainfall averages 7.9 inches, pan-measured evaporation averages 89 inches, and lake evaporation is estimated at 67 inches per year (CH2MHill, 1992). Evaporation exceeds rainfall in each month of the year. Maximum net evaporation occurs in May and June, and minimum evaporation occurs in December and January. Because of the high net lake evaporation from rainfall (59 inches per year), there are no natural perennial streams in

the immediate project area. Intermittent streams and arroyos in the basin lowlands are important only during the infrequent periods of heavy rainfall. Surface drainage from undeveloped parts of HAFB is controlled by large arroyos (e.g., Dillard Draw), which direct flow to the southwest, toward White Sands National Monument.

The hydrology of the southern portion of the installation (south of the WWTP) is dominated by several manmade features that form a connected hydrologic system. The principal components of this system are: the stormwater drainage canal, Lagoon G, Lake Holloman, and Lake Stinky. In addition, there are both natural and constructed wetlands in this area, some of which are related to and dependent on the manmade surface water features. These features are described in the following sections.

#### **3.3.6.2 Lagoon G**

HAFB currently generates under 1 million gallons of wastewater per day. Approximately 200,000 to 250,000 gallons per day of treated effluent empty into Lagoon G (approximately 46 acres) through a 6-inch forcemain. This effluent is eventually discharged to the stormwater drainage canal southwest of Lagoon G and north of Highway 70. A berm surrounding this lagoon prevents stormwater from flowing into the lagoon. Lagoon G is considered a Waters of the United States (US) and is protected under sections 401, 402, and 404 of the Clean Water Act.

#### **3.3.6.3 Stormwater Drainage Canal**

The stormwater drainage canal starts at a point north of Lagoon G, and then extends southwest of the lagoon into Lake Holloman. The canal is about 2 feet wide and 1 mile long with an elevation change of about 5 feet between Lagoon G and Lake Holloman. The base storm sewer system drains directly into this canal. The drainage basin for the storm sewer system encompasses about 13 acres. The canal also receives effluent from Lagoon G.

#### **3.3.6.4 Lake Holloman**

Lake Holloman is considered a Waters of the US and is protected under sections 401, 402, and 404 of the Clean Water Act. It was created in 1965 to receive excess flow from the previous sewage treatment lagoon system. It was formed by the construction of a non-engineered earthen dam midway along an existing ephemeral lake (playa) that normally received runoff from HAFB. Lake Holloman receives water from the stormwater drainage canal, Lagoon G, and effluent from the WWTP. The amount of effluent going to Lake Holloman can be adjusted depending on the water requirements of Lagoon G and the constructed wetlands. The lake is in a state of dynamic equilibrium, rising and falling with seasonal and annual variations in runoff, local shallow groundwater, and treated effluent from the WWTP.

#### **3.3.6.5 Lake Stinky**

Lake Stinky encompasses as much as 35 acres of playa below Lake Holloman. This area represents a remnant of the original playa grassland present in the project area prior to the construction of the lagoon system for the original wastewater treatment system in 1948. Persistent seepage from Lake Holloman is sufficient to maintain a limited surface water



expression in Lake Stinky, as well as a substantial growth of wetland vegetation (tamarisk and saltgrass) at the base of the dam separating Lake Stinky and Lake Holloman. During most years, total annual discharge to Lake Holloman is sufficient to result in overflow to Lake Stinky. On these occasions, Lake Stinky extends south from the dam through culverts underneath U.S. Highway 70/82 to encompass as much as 61 acres.

### 3.3.6.6 Wetlands

Jurisdictional wetlands are a subcategory of waters of the U.S. and have been defined by the U.S. Army Corps of Engineers as areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions.

There are approximately 119 acres of jurisdictional wetlands on the main base (United States Air Force, 1996), the majority of which are located south of the WWTP near Lagoon G and Lake Holloman (79 acres). Some of these areas are fed partly by seepage from artificial impoundments (e.g., north end of Lake Stinky; west and south of Lagoon G). Others may have an independent existence, or be only slightly affected by the impoundments. These latter areas seem to be remnants of the wetlands that existed before the construction of the present system.

Detailed physical and biological properties of the wetlands, including the constructed wetlands, in this area are discussed in detail in the HAFB INRMP and in the United States Air Force Report (1996) *Delineation of Jurisdictional Waters of the United States and Wetlands on Holloman Air Force Base, New Mexico*. The remaining wetlands are scattered throughout the installation. Many of the wetlands located south of the WWTP are important foraging areas for resident and migrating birds and/or bats.

### 3.3.6.7 Water Quality

Because the WWTP discharge receiving waters provide habitat for numerous plant and wildlife species, water quality of these receiving waters is important. The WWTP receiving waters are saline (normally about half the salinity of seawater), sulfate-rich, and very rich in nutrients. Currently, effluent from the HAFB WWTP is meeting its EPA established permit limits.

## 3.3.7 Biological Resources

### 3.3.7.1 Flora

HAFB is dominated by xerophytic shrubland and grassland communities having plant assemblages biogeographically related to the Great Basin and Chihuahuan Desert. Other plant communities previously identified on the installation include those that are located in brackish marshes and riparian and/or wetland areas, such as those south of the WWTP. Field investigations and vegetation surveys have identified the plant species listed in the table below.

**Table 3-1. Plant Species Observed at HAFB**

Common Name	Scientific Name
Desert holly	<i>Acourtia nana</i>

Common Name	Scientific Name
Iodine bush (or pickleweed bush)	<i>Allenrolfea occidentalis</i>
Western ragweed	<i>Ambrosia psilostachya</i>
Fourwing saltbush	<i>Atriplex canescens</i>
Seep willow	<i>Baccharis salicifolia</i>
Thistle	<i>Cirsium undulatum</i>
Alkaliweed	<i>Cressa truxillensis</i>
Fluffgrass	<i>Dasyochloa pulchella</i>
Tansymustard	<i>Descurainia pinnata</i>
Desert saltgrass	<i>Distichlis spicata</i> var. <i>stricta</i>
Spectaclepod	<i>Dithyrea wislizeni</i>
Fendler's hedgehog	<i>Echinocereus fenderli</i>
Flaming torch hedgehog	<i>Echinocereus triglochidiatus</i>
Torrey's jointfir	<i>Ephedra torreyana</i>
Buckwheat	<i>Eriogonum</i> spp.
Coryphantha (or spinystar)	<i>Escobaria vivipara</i>
Tarbrush	<i>Flourensia cernua</i>
Broom snakeweed	<i>Gutierrezia sarothrae</i>
Salt heliotrope	<i>Heliotropium curassavicum</i>
Tobosa	<i>Hilaria mutica</i>
Bushpea	<i>Hoffmanseggia glauca</i>
Hymenopappus	<i>Hymenopappus</i> spp.
Allthorn	<i>Koeberlinia spinosa</i>
Creosotebush	<i>Larrea tridentata</i>
Peppergrass	<i>Lepidium virginicum</i>
Bladderpod	<i>Lesquerella</i> spp.
Wolfberry	<i>Lycium berlandieri</i>
Blazingstar	<i>Mentzelia multiflora</i>
Bush muhly	<i>Muhlenbergia porteri</i>
Ring muhly	<i>Muhlenbergia torreyi</i>
Prickly pear	<i>Opuntia</i> spp.
Purple prickly pear	<i>Opuntia violacea</i>
Tulip prickly pear	<i>Opuntia phaeacantha</i>
Plains prickly pear	<i>Opuntia polycantha</i>
Walkingstick cholla	<i>Opuntia imbricata</i>
Tasajillo	<i>Opuntia leptocaulis</i>
Mariola	<i>Parthenium incanum</i>
Devil's claw	<i>Proboscidea parviflora</i>
Honey mesquite	<i>Prosopis glandulosa</i>
Curly dock	<i>Rumex crispus</i>
Russian thistle	<i>Salsola kali</i>
Burrograss	<i>Scleropogon brevifolius</i>
Silverleaf nightshade	<i>Solanum elaeagnifolium</i>
Globemallow	<i>Sphaeralcea</i> spp.
Spear globemallow	<i>Sphaeralcea subhastata</i>
Alkali sacaton	<i>Sporobolus airoides</i>
Neally dropseed	<i>Sporobolus nealleyi</i>
Saltcedar	<i>Tamarix ramosissima</i>
Gramma grass cactus	<i>Toumeyia papyracantha</i>
Soaptree yucca	<i>Yucca elata</i>



### 3.3.7.2 Fauna

A wide variety of fauna can be found at HAFB as it provides a relatively diverse range of habitats for both aquatic and terrestrial species. Habitats found on the installation provide ideal environments for a variety of reptiles and amphibians, mammals, and birds. Available habitats include upland grasslands, xerophytic shrublands, brackish marshlands, playas, and surface water habitats. Additionally, the area south of the WWTP also offers a relatively extensive amount of shoreline/edge habitat along Lakes Holloman and Stinky, the stormwater drainage canal, Lagoon G, and associated constructed wetlands.

Previously performed wildlife inventories have identified numerous species of wildlife throughout the installation. Major groups of fauna are discussed below.

#### Invertebrates

Though invertebrates are an important feature of the desert ecosystem, little is known about their diversity in arid lands. Invertebrates play important roles as beneficial pollinators, parasites, predators, detritivores, and as prey for small mammals, reptiles, fish, and birds. To date, there have been no base-wide studies at HAFB to determine invertebrate species diversity.

However, studies on reptiles, birds, and mosquitofish (*Gambusia affinis*) habitat suggest that the roles taken by invertebrates contribute to ecosystem function. For example, it has been found that the animals on the installation consume insects such as grasshoppers (*Orthoptera*), butterflies and moths (*Lepidoptera*), beetles (*Coleoptera* and *Bledius*), adult chironomids (*Diptera*), and corixids (aquatic *Hemiptera*).

A total of 26 different aquatic invertebrate taxa have been identified in the area south of the WWTP (Freehling, et al., 1999) and certain fish populations located in Lost River and Malone Draw feed on mosquitoes, amphipods, and annelid worms (Suminski, 1977; Turner, 1987). Some of the invertebrate species that have been identified on the installation include harvester ants (*Pogonomyrmex* spp.), honeypot ants (*Myrmecocystus*), and grasshoppers (*Orthoptera*).

#### Vertebrates

##### **Reptiles and Amphibians**

Two herpetofauna species surveys have been performed at HAFB: (1) along roads for the Texas horned lizard (*Phrynosoma cornutum*) (Mehlhop, et al., 1998), and (2) at the cinetheodolite missile towers (Johnson, et al., 1997a). The Texas horned lizard survey was conducted on the Main Base and the Boles Wells Water System Annex. The Texas horned lizard, formerly a Category 2 species for federal listing as endangered or threatened, was reclassified February 28, 1996, as a species of concern (United States Department of Interior, 1996). This lizard appears to be abundant on HAFB (Mehlhop, et al., 1998) and was found within the major plant community types on both the Main Base and Boles Wells Water System Annex. Other reptiles found during these surveys are listed below.



**Table 3-2. Herpetofauna Species Observed at HAFB**

Common Name	Scientific Name
Little striped whiptail	<i>Cnemidophorus inornatus</i>
New Mexico whiptail	<i>Cnemidophorus neomexicanus</i>
Checkered whiptail	<i>Cnemidophorus tesselatus</i>
Western diamondback rattlesnake	<i>Crotalus atrox</i>
Western prairie rattlesnake (or Western rattlesnake)	<i>Crotalus viridis</i>
Common collared lizard	<i>Crotaphytus collaris</i>
Long-nosed leopard lizard	<i>Gambelia wislizenii</i>
Lesser earless lizard	<i>Holbrookia maculata</i>
Coachwhip	<i>Masticophis flagellum</i>
Texas horned lizard	<i>Phrynosoma cornutum</i>
Short-horned lizard	<i>Phrynosoma modestum</i>
Gopher snake	<i>Pituophis melanoleucus</i>
Couch's spadefoot toad	<i>Scaphiopus couchii</i>
Desert spiny lizard	<i>Sceloporus magister</i>
Massasauga	<i>Sistrurus catenatus</i>
Ground snake	<i>Sonora semiannulata</i>
Side-blotched lizard	<i>Uta stansburiana</i>

Other reptiles and/or amphibians that may occur at HAFB that are not listed above include rat snakes (*Elaphe* spp.), rattlesnakes (*C. molossus*), and the greater earless lizard (*Cophosaurus texanus*).

### **Mammals**

The most common mammals at HAFB consist of various rodent species and the black-tailed jackrabbit (*Lepus californicus*), found throughout the Great Basin Desert Shrub habitats in New Mexico (Frey and Yates, 1996). Numerous small colonies of bats that forage for insects at the numerous playas, wetlands, and riparian habitats (Johnson et al., 1997a) can be found on the installation. Bats on HAFB roost in abandoned and inhabited buildings and culverts. The table below lists some of the bat species that have been observed at HAFB.

**Table 3-3. Bat Species Observed at HAFB**

Common Name	Scientific Name
Pallid bat	<i>Antrozous pallidus pallidus</i>
Mexican free-tailed bat	<i>Tadarida brasiliensis</i>
Hoary bat	<i>Lasiurus cinereus</i>
Small-footed myotis	<i>Myotis ciliolabrum melanorhinus</i>
California myotis	<i>Myotis californicus</i>
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>
Silver-haired bat	<i>Lasionycteris noctivagans</i>
Spotted bat	<i>Euderma maculatum</i>

Fourteen species of rodents have been identified on the dune periphery of the installation. These species are listed in the table below.

**Table 3-4. Rodent Species Observed at HAFB**

Common Name	Scientific Name
Desert Pocket Mouse	<i>Chaetodipus penicillatus</i>
Merriam Kangaroo Rat	<i>Dipodomys merriami</i>
Ord's Kangaroo Rat	<i>Dipodomys ordii</i>
House Mouse	<i>Mus musculus</i>
Southern Plains Woodrat	<i>Neotoma micropus canescens</i>
Mearn's Grasshopper Mouse	<i>Onychomys arenicola</i>
Plains Pocket Mouse	<i>Perognathus flavescens</i>
Plains Pocket Mouse (lighter pelage)	<i>Perognathus flavescens gypsi</i>
Silky Pocket Mouse	<i>Perognathus flavus</i>
Cactus Mouse	<i>Peromyscus eremicus</i>
White-footed Mouse	<i>Peromyscus leucopus</i>
Deer Mouse	<i>Peromyscus maniculatus</i>
Western Harvest Mouse	<i>Reithrodontomys megalotis</i>
Spotted Ground Squirrel	<i>Spermophilus spilosoma</i>

The Ord's Kangaroo Rat (*Dipodomys ordii*), Desert Pocket Mouse (*Chaetodipus penicillatus*), and the Plains Pocket Mouse with the lighter pelage (*Perognathus flavescens gypsi*) were found primarily within the dunes; others were found equally distributed or too few were captured to determine the habitat affinity (Root and Demarais, 1997; Johnson et al., 1997a; Johnson, et al., 1997b).

At least five mammalian species that have been or could be observed on HAFB have been introduced by man. These five species include the house mouse (*Mus musculus*), Norway rat (*Rattus norvegicus*), horse (*Equus caballus*), barbary sheep (*Ammotragus lervia*), and gemsbok (*Oryx gazella*). The latter two species were introduced by the New Mexico Department of Game and Fish in the late 1960s. Native big game mammals are uncommon in the project area and include mule deer (*Odocoileus hemionus*) and pronghorn (*Antilocapra americana*). Predators include bobcat (*Lynx rufus*), gray fox (*Urocyon cinereoargenteus*), and coyote (*Canis latrans*). Badger (*Taxidea taxus*) and striped skunk (*Mephitis mephitis*) are uncommon predators and omnivores, respectively.

### **Birds**

The complex of constructed wetlands south of the WWTP provides important habitat for a number of bird species. Bird censuses are ongoing at HAFB and a complete list of birds can be found in the HAFB INRMP. The HAFB INRMP further details the relationship between habitat at HAFB and the bird species found there. The table below lists some of the previously observed bird species at HAFB.



**Table 3-5. Bird Species Observed at HAFB**

Common Name	Scientific Name
<b>Raptors</b>	
Turkey vulture	<i>Cathartes aura</i>
American kestrel	<i>Falco sparverius</i>
Red-tailed hawk	<i>Buteo jamaicensis</i>
Northern harrier	<i>Circus cyaneus</i>
<b>Goatsuckers</b>	
Lesser nighthawk	<i>Chordeiles acutipennis</i>
<b>Perching Birds and Neotropical Shorebirds</b>	
Horned lark	<i>Eremophila alpestris</i>
Cactus wren	<i>Campylorhynchus brunneicapillus</i>
Black-throated sparrow	<i>Amphispiza bilineata</i>
Western meadowlark	<i>Sturnella neglecta</i>
Scott's oriole	<i>Icterus parisorum</i>
American avocet	<i>Recurvirostra Americana</i>
Green heron	<i>Butorides virescens</i>
Western kingbird	<i>Tyrannus verticalis</i>
Blue grosbeak	<i>Guiraca caerulea</i>
Flycatchers	<i>Empidonax</i> sp.
Wilson's warbler	<i>Wilsonia Canadensis</i>
<b>Shorebirds and Waterfowl</b>	
Mallards	<i>Anas platyrhynchos</i>
Northern shoveler	<i>Anas clypeata</i>
Blue-winged teal	<i>Anas discors</i>
Lesser scaup	<i>Aythya affinis</i>
Ring-necked duck	<i>Aythya collaris</i>
Ruddy duck	<i>Oxyura jamaicensis</i>
Snowy plover	<i>Charadrius alexandrinus nivosus</i>
Wilson's phalarope	<i>Phalaropus tricolor</i>

### 3.3.8 Cultural Resources

An archaeological survey was performed on February 14, 1979, in support of the construction of an irrigation field, access road, powerline, water line, and pump house associated with sewage treatment facilities that were in place at HAFB at that time. This archaeological survey was conducted on a strip of land 1.05 miles in length and 0.5 mile in width located on the northern half of Section 21 of the United States Geological Survey (USGS) Quadrangle map of Garton Lake, New Mexico, a small portion of the northwest ¼ of Section 22 of the USGS Quadrangle map of Holloman, New Mexico, and an area east and west of the northern portion of Lake Holloman, which is part of the project area examined for this EA. No cultural resources were found during this archaeological survey. In addition to the archaeological survey, BLM records of archaeological findings were reviewed for this area. The BLM files did not indicate any previously recorded archaeological sites in Township 17 South, Range 8 East of the USGS Quadrangle map of Garton Lake and Holloman, New Mexico.



A Phase II evaluation of 45 archaeological sites at HAFB was performed by Geo-Marine Inc., between May and July 1996. This evaluation included all sites found by the completed inventory of the area of HAFB served by the wastewater collection and treatment system. Of these 45 sites, 40 are located in the general vicinity of the wastewater utility system at HAFB, but none are located in the area of direct affects of system operation or maintenance.

Of the total 45 sites, 27 were test excavated to determine if subsurface cultural remains were present and if so, to what depth, and the temporal range of sites. Of the 27 excavated sites, 15 were considered eligible for the National Register of Historic Places (NRHP) and 12 were deemed ineligible for the NRHP. An additional 7 sites that were not test excavated were considered eligible for the NRHP.

Of those 40 sites located in proximity to the wastewater utility system at HAFB, 3 were considered eligible for inclusion on the NRHP, 9 were considered ineligible, and the remaining 28 were considered potentially eligible for inclusion on the NRHP. This work is published in HAFB Report # 1996-005, *South Main Base and High Speed Test Track Sites National Register Eligibility Evaluations, Holloman Air Force Base, Otero County, New Mexico* (Geo-Marine, Inc., 1997). All future maintenance, modification, or expansion of the wastewater system will be subject to prior review for compliance with all Federal and State requirements for avoidance or mitigation of affects on cultural resources.

### 3.3.9 Socioeconomic Resources

The socioeconomic region of influence (ROI) for HAFB consists of the counties of Otero and Doña Ana, New Mexico, and El Paso County, Texas. The population of the three-county area was 935,625 in 2002 (United States Department of Commerce, Bureau of Economic Analysis, 2004). Due to its proximity to HAFB, the City of Alamogordo is the community that is most likely to be directly affected by the proposed action.

The majority of HAFB personnel reside on the installation or in the City of Alamogordo. Others reside in adjacent communities in Otero County (such as Tularosa, La Luz, Cloudcroft, or High Rolls) or commute from Las Cruces or El Paso.

According to the Economic Impact Statement issued by the HAFB Public Affairs Office (PAO) for fiscal year 2003 (FY03), a total of 20,800 persons are employed at HAFB. The PAO reports that 540 individuals employed at HAFB are contractors that work on the installation. Of those currently employed at HAFB, approximately 2,213 are civilians from local areas designated as the Economic Impact Region (EIR) which includes all areas encompassed in a 50-mile radius from the center of HAFB. Communities located in the EIR include Alamogordo, Tularosa, and Ruidoso.

The following data for the installation's impact on the economy and/or job market in the local community was provided by the HAFB PAO. The table below details the estimated number of indirect jobs created by HAFB for FY03.

**Table 3-6. Indirect Jobs Created by HAFB (FY03)**

Personnel	Base Jobs	Multiplier	Indirect Jobs
U.S. Air Force Duty	4,608	0.29	1,336
Department of Defense (DOD) Civilians	947	0.43	407
Other Civilians	1,213	0.43	522
<b>Total</b>	<b>6,768</b>		<b>2,265</b>
Average annual pay for local community: \$37,800			
Estimated annual dollar value of jobs created: \$85,617,000			

### 3.4 Description of Relevant Pre-Existing Environmental Factors

#### 3.4.1 Resource Conservation and Recovery Act (RCRA) Facility Investigations

A *Phase II RCRA Facility Investigation (RFI) Work Plan – Air Base Sewer System* (Foster Wheeler Environmental Corporation & Radian Corporation, 1995) was reviewed in the preparation of this EA. EPA issued a policy where sewer systems were to be treated and characterized as solid waste management units (SWMUs). Because of this policy, this RFI Work Plan was prepared to comply with the RCRA corrective action process where releases or potential releases from SWMUs are to be identified and, as necessary, characterized, and remediated.

It should be noted that other previous RCRA action led to the closure of the former WWTP. However, the sewer collection lines associated with this former system are still in place and active, and these lines are the subject of the RFI Work Plan.

In this RFI, the installation's sanitary and industrial sewer lines that drain to the WWTP are referred to as the sewer system and are also characterized as SWMU 183. Storm sewer lines are not considered part of SWMU 183. The new WWTP began operation in July 1996 and is not considered part of SWMU 183 but that the sewer lines are still included in SWMU 183.

The Work Plan identifies lines of concern (LOCs) which are sewer line segments that meet two criteria: 1) their physical condition indicates that they may have leaked; and 2) they are located downgradient from a potential source of hazardous constituents connected directly to the sewer system.

The Work Plan further indicates that the sewer system was installed in 1947 and has been expanded and modified as necessary. The Work Plan indicates the sampling methods to be used in assessing the LOCs and identifies potential exposure pathways and receptors with any hazardous constituents associated with the LOCs. To date, funding for the RFI has not been appropriated and the investigation has not been performed.



### 3.4.2 WWTP Chlorine Gas Use

The WWTP currently uses gaseous chlorine for disinfection and stores chlorine in quantities in excess of 2,500 pounds. The chlorine process system used at the WWTP is subject to the Occupational Safety and Health Administration (OSHA), *Process Safety Management of Highly Hazardous Chemicals* standard 29 CFR § 1910.119 and the EPA regulation *Risk Management Program (RMP) for Accidental Chemical Release*, found at 40 CFR § 68.71. Consequently, the WWTP currently has a chlorine gas process prevention program aimed at preventing the release of chlorine that is detailed in the HAFB *Risk Management Plan, Five Year Update, Wastewater Treatment Plant, Chlorine Gas Process* (Environmental Resources Management, Inc., 2004.) The major objective of this prevention program is to implement a management system to prevent releases of chlorine, especially into locations that could expose the public and others to serious hazards. The program employs a systematic approach to evaluating the whole process including process design, process technology, process changes, operational and maintenance activities and procedures, non-routine activities and procedures, emergency preparedness plans and procedures, training programs, and other interrelated elements that affect the WWTP chlorine system.

### 3.5 Description of Areas Related to Cumulative Effects

A cumulative effect is defined as an effect on the environment that results from the incremental effect of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place locally or regionally over a period of time. The purpose of analyzing the cumulative effects of a proposed action is to ensure that federal decisions consider the “big picture” of the consequences of the proposed action.

Cumulative effects are identified by defining the direct and indirect effects of the proposed action, determining which environmental resources are affected, and deciding which effects on these resources are important from a cumulative effects perspective. Also, when analyzing cumulative effects, the spatial (geographical area) and temporal (time frame) components must be expanded beyond the scope of the proposed action.

Because there is no difference between the proposed action and the no action alternative, other than who owns the wastewater utility system, there are no anticipated cumulative environmental effects associated with the proposed action.



## **4 ENVIRONMENTAL CONSEQUENCES**

### **4.1 Introduction**

This Chapter presents the potential environmental consequences that could occur as the result of the implementation of the proposed action and the no action alternative.

### **4.2 Predicted Effects on Relevant Facilities and/or Operations**

#### **4.2.1 Wastewater Collection System**

##### **4.2.1.1 Effects of Proposed Action**

If the proposed action were implemented, the wastewater collection system would no longer be owned by the Air Force and the operation of the system would be a contractual obligation of the new owner to the Air Force.

Regulatory issues associated with privatization of the wastewater collection system have been identified in Sections 1.7 and 2.2.1.1 for further discussion beyond the scope of the EA process. The planned context of the HAFB wastewater collection system privatization action is that the ownership would be transferred and the overall function of the system would remain substantially the same.

##### **4.2.1.2 Effects of No Action Alternative**

The no action alternative would not result in any substantial effects on the existing function or management of the wastewater utility system at HAFB.

#### **4.2.2 Wastewater Treatment Plant**

##### **4.2.2.1 Effects of Proposed Action**

If the proposed action were implemented, the WWTP system would no longer be owned by the Air Force and the operation of the plant would be a contractual obligation of the new owner to the Air Force.

Regulatory issues associated with privatization of the wastewater collection system have been identified in Sections 1.7 and 2.2.1.1 for further discussion beyond the scope of the EA process. The planned context of the HAFB wastewater collection system privatization action is that the ownership would be transferred and the overall function of the system would remain substantially the same.

#### **4.2.2.2 Effects of No Action Alternative**

The no action alternative would not result in any substantial effects on the existing function or management of the WWTP at HAFB.

### **4.2.3 Hazardous Materials and Hazardous Waste**

#### **4.2.3.1 Effects of Proposed Action**

If the proposed action were implemented, the wastewater utility system would no longer be owned by the Air Force and the operation of the WWTP would be a contractual obligation of the new owner to the Air Force.

The private owner of the wastewater utility system would be a tenant on the installation. Like the current private operator, the new private owner would continue to be responsible for the tracking of hazardous materials and/or wastes, proper hazardous waste identification, storage, transportation, and disposal, and for the implementation of procedures intended to reduce the volume and toxicity of the hazardous waste generated. Further, the new private owner would have to coordinate the use of these materials and the disposal of generated hazardous wastes with 49 CES/CEV and the DRMO.

#### **4.2.3.2 Effects of No Action Alternative**

The no action alternative would not result in any substantial effects on the existing function or management of hazardous materials and hazardous waste used in the operation of the wastewater utility system.

## **4.3 Predicted Effects on Relevant Affected Resources**

### **4.3.1 Physiography, Geology, and Topography**

#### **4.3.1.1 Effects of Proposed Action**

Implementation of the proposed action would not result in any substantial effects on existing physiographic, topographic, or geologic conditions at HAFB.

#### **4.3.1.2 Effects of No Action Alternative**

The no action alternative would not result in any substantial effects on existing physiographic, topographic, or geologic conditions at HAFB.

### **4.3.2 Soils**

#### **4.3.2.1 Effects of Proposed Action**

Implementation of the proposed action would not result in any substantial effects on existing soil conditions at HAFB.

#### **4.3.2.2 Effects of No Action Alternative**

The no action alternative would not result in any substantial effects on existing soil conditions at HAFB.

#### **4.3.3 Land Use**

##### **4.3.3.1 Effects of Proposed Action**

Implementation of the proposed action would not result in any significant impacts on land use at or near HAFB.

##### **4.3.3.2 Effects of No Action Alternative**

The no action alternative would not result in any significant impacts on land use at or near HAFB.

#### **4.3.4 Air Quality**

##### **4.3.4.1 Effects of Proposed Action**

It is not anticipated that implementation of the proposed action would result in any substantial effects on air quality at HAFB. The wastewater treatment facility is not specifically listed as an individual source in the Title V Operating Permit. Any incidental air pollutant discharges of volatile organic compounds and hazardous air pollutants from the wastewater treatment facility are reported as part of overall Holloman Air Force Base facility air pollutant discharges. The proposed privatization will not impact the present HAFB Title V Air Permit or give rise to additional air emissions permitting at the WWTP.

##### **4.3.4.2 Effects of No Action Alternative**

The no action alternative would not result in any substantial effects on air quality at HAFB.

#### **4.3.5 Water Resources**

##### **4.3.5.1 Effects of the Proposed Action**

Implementation of the proposed action would not result in any substantial effects on existing water resources. The planned context of the HAFB WWTP privatization action is that the ownership would be transferred and the overall function of the collection and treatment system would remain substantially the same. Climatology and hydrology, Lagoon G, the stormwater drainage canal, Lake Holloman, Lake Stinky, and wetlands at HAFB would not be affected by implementation of the proposed action. Further, water quality would not be affected by implementation of the proposed action.



#### **4.3.5.2 Effects of No Action Alternative**

The no action alternative would not result in any substantial effects on existing water resources. Climatology and hydrology, Lagoon G, the stormwater drainage canal, Lake Holloman, Lake Stinky, and wetlands at HAFB would not be affected by implementation of the no action alternative. Further, water quality would not be affected by the no action alternative.

#### **4.3.6 Biological Resources**

##### **4.3.6.1 Effects of the Proposed Action**

Implementation of the proposed action would not result in any substantial effects on existing biological resources at HAFB.

##### **4.3.6.2 Effects of the No Action Alternative**

The no action alternative would not result in any substantial effects on existing biological resources at HAFB.

#### **4.3.7 Cultural Resources**

##### **4.3.7.1 Effects of the Proposed Action**

Implementation of the proposed action would not result in any effects on existing cultural resources at HAFB.

##### **4.3.7.2 Effects of the No Action Alternative**

The no action alternative would not result in any effects on existing cultural resources at HAFB.

#### **4.3.8 Socioeconomic Resources**

##### **4.3.8.1 Effects of the Proposed Action**

Implementation of the proposed action would not result in any substantial effects on existing socioeconomic resources at HAFB.

##### **4.3.8.2 Effects of the No Action Alternative**

The no action alternative would not result in any substantial effects on existing socioeconomic resources at HAFB.

## **5 LIST OF PREPARERS AND REVIEWERS**

Paige DeBoer. Bhate Environmental Associates, Inc. Bachelor of Science (BS), Wildlife. Associate Environmental Professional.

Gregory M. Gainer. Bhate Environmental Associates, Inc. BS, Civil Engineering; Master of Science (MS), Industrial Engineering; MS, Civil and Environmental Engineering. Registered Environmental Manager.

Corey K. Green. Bhate Environmental Associates, Inc. BS, Chemistry; MS, Environmental Systems Engineering. Registered Environmental Manager.

Diane J. Lazarus. Bhate Environmental Associates, Inc. BS, Environmental Science. Qualified Environmental Professional.

Louis M. Montgomery. Bhate Environmental Associates, Inc. Bachelor of Civil Engineering. J.D., Professional Engineer.

Karen J. Niebuhr. Bhate Environmental Associates, Inc. BS, Chemical Engineering; MS, Biochemical Engineering. Professional Engineer.

Dana C. Tilton. Bhate Environmental Associates, Inc. BS, Biology; MS, Environmental Management.

## **6 LIST OF AGENCIES AND PERSONS CONSULTED AND/OR PROVIDED COPIES OF THIS ENVIRONMENTAL ASSESSMENT**

Ms. Jeanne Dye  
49 CES/CEV  
HAFB  
(505) 572-3931

Mr. Andrew Gomolak  
49 CES/CEV  
HAFB  
(505) 572-5403

Mr. Rich Powell  
New Mexico Environment Department (NMED), Surface Water Quality Bureau  
(505) 827-2798

Mr. David Scruggs  
49 CES/CEV  
HAFB  
(505) 827-2827

Mr. Glenn Saums, Staff Manager  
Point Source Regulation Section  
NMED, Surface Water Quality Bureau  
(505) 827-2827

Mr. Dale Woosley  
49 CES, Operations Engineering  
HAFB  
(505) 572-3296



## 7 REFERENCES

CH2MHill, 1992. *Proposed Definition for U.S. Air Force Wastewater Treatment Facilities at Holloman AFB*. Prepared for U.S. Army Corps of Engineers.

Council on Environmental Quality, 1997. Executive Office of the President, *Considering Cumulative Effects Under the National Environmental Policy Act*. U.S. Government Printing Office.

Ecology & Environment, Inc., February 1999. *Industrial Wastewater Pretreatment Study Final Phase II Report*.

Ecology & Environment, Inc., March 1999. *Industrial Wastewater Pretreatment Study Phase III Report Customer Concept Document*.

Environmental Resources Management, Inc., 2004. *Risk Management Plan, Five Year Update, Wastewater Treatment Plant, Chlorine Gas Process*.

Foster Wheeler Corporation/Radian Corporation, 1995. *Phase II RCRA Facility Investigation Work Plan – Air Base Sewer System, Holloman Air Force Base*.

Freehling, M., K. Johnson, and L. DeLay, 1999. *Shorebird foraging and invertebrate occurrence at the Holloman Wetlands, Holloman Air Force Base, 1996-1998, New Mexico Natural Heritage Program, Biology Department, University of New Mexico, September 9, 1999*.

Frey, J. K. and T. L. Yates, 1996. *Mammalian Diversity in New Mexico*. New Mexico Journal of Science, Vol. 36: 4-37.

General Services Administration, 2004. United States Air Force Utilities Privatization, Request for Proposals (RFP) GS-00P-04-BSC-0291, *Wastewater Utility System, Holloman Air Force Base, New Mexico*.

Geo-Marine, Inc., 1997. *South Main Base and High Speed Test Track Sites National Register Eligibility Evaluations, Holloman Air Force Base, Otero County, New Mexico*.

Holloman Air Force Base, PAO, 2004. *Economic Impact Statement, FY 2003*.

Johnson, K., K. Score, S. Berckman, J. S. Altenbach, and P. Mehlhop, 1997a. *A survey of biological resources at the Cinetheodolite Missile Towers on Holloman Air Force Base and White Sands Missile Range, New Mexico*, New Mexico Natural Heritage Program, Biology Department, University of New Mexico, Albuquerque, New Mexico, November 7, 1997.

Johnson, K., L. DeLay, P. Mehlhop, and K. Score, 1997b. *Distribution, Habitat, and Reproductive Success of Burrowing Owls on Holloman Air Force Base, New Mexico*, New Mexico Natural Heritage Program, Biology Department, University of New Mexico, July 31, 1997.

Mehlhop, P., N.M. Runyan, E. DeBruin, J.M. Brown-Ellington, and E. Milford, 1998. *Sensitive Species Management Plans for Holloman Air Force Base*.

National Environmental Policy Act. 1969. 40 CFR Parts 1500-1508.

Reiser, H., T. Neville, and J.L. Lee, 2000. *Integrated Natural Resources Management Plan, Holloman Air Force Base, New Mexico*.

Root, J. and S. Demarais, 1997. *Small Mammal Projects Conducted on Holloman Air Force Base*.

Suminski, R.R., 1977. *Life History of the White Sands Pupfish and Distribution of Cyprinodon in New Mexico*.

Turner, P.R., 1987. *Ecology and Management Needs of the White Sands Pupfish in the Tularosa Basin of New Mexico*.

United States Air Force, 1996. *Delineations of Jurisdictional Waters of the United States and Wetlands on Holloman Air Force Base, New Mexico*. U.S. Army Corps of Engineers, Fort Worth District, Fort Worth, Texas.

United States Department of Agriculture, Soil Conservation Service and Forest Service in cooperation with the New Mexico State University Agricultural Experiment Station, 1981. *Soil Survey of Otero Area, New Mexico—Parts of Otero, Eddy, and Chaves Counties, United States..*

United States Department of Commerce, Bureau of Economic Analysis, 2004

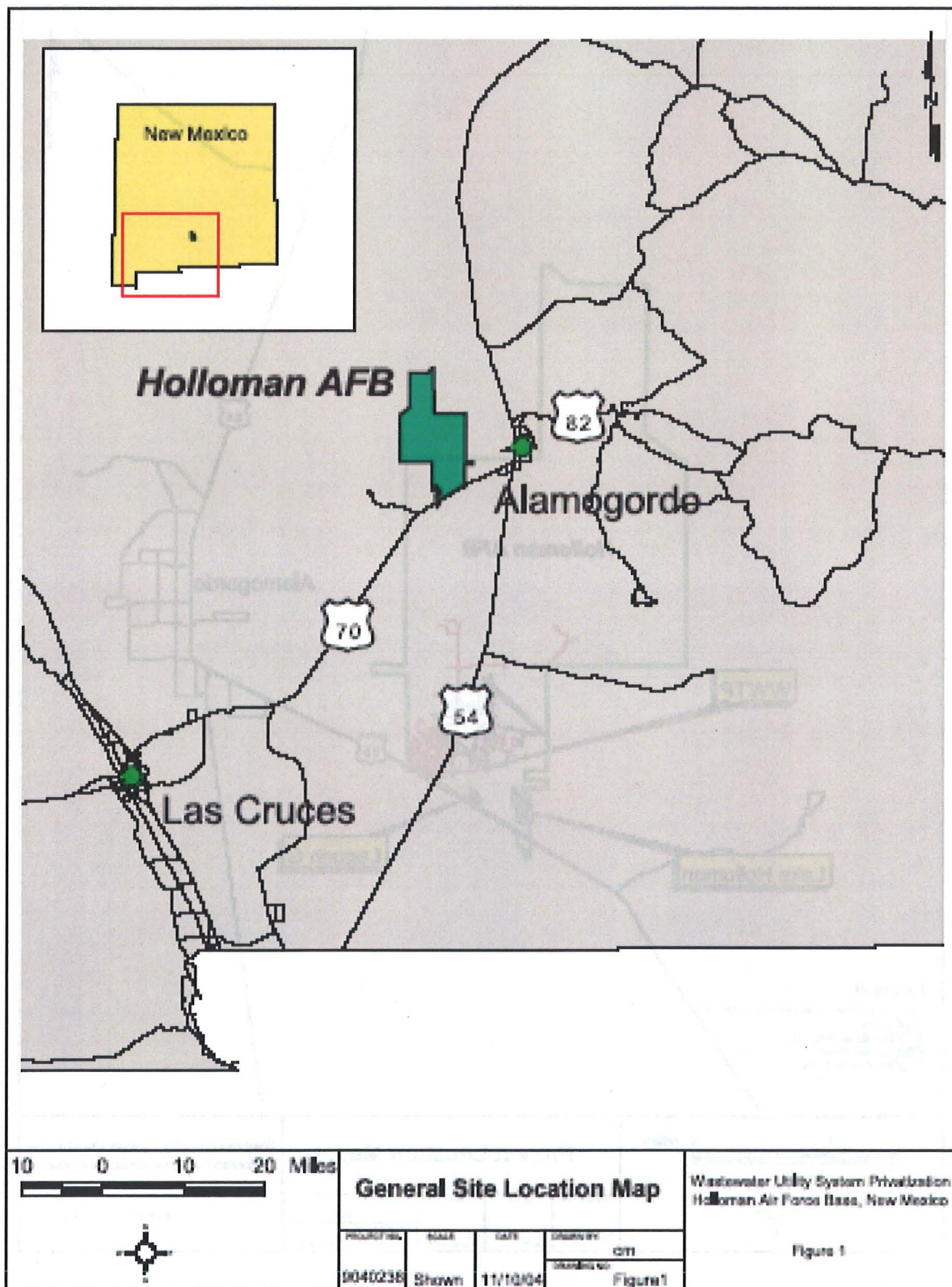
United States Department of Interior, U.S. Fish and Wildlife Service, 1996. *Endangered and threatened wildlife and plants 50 CFR 17.11 and 17.12*.

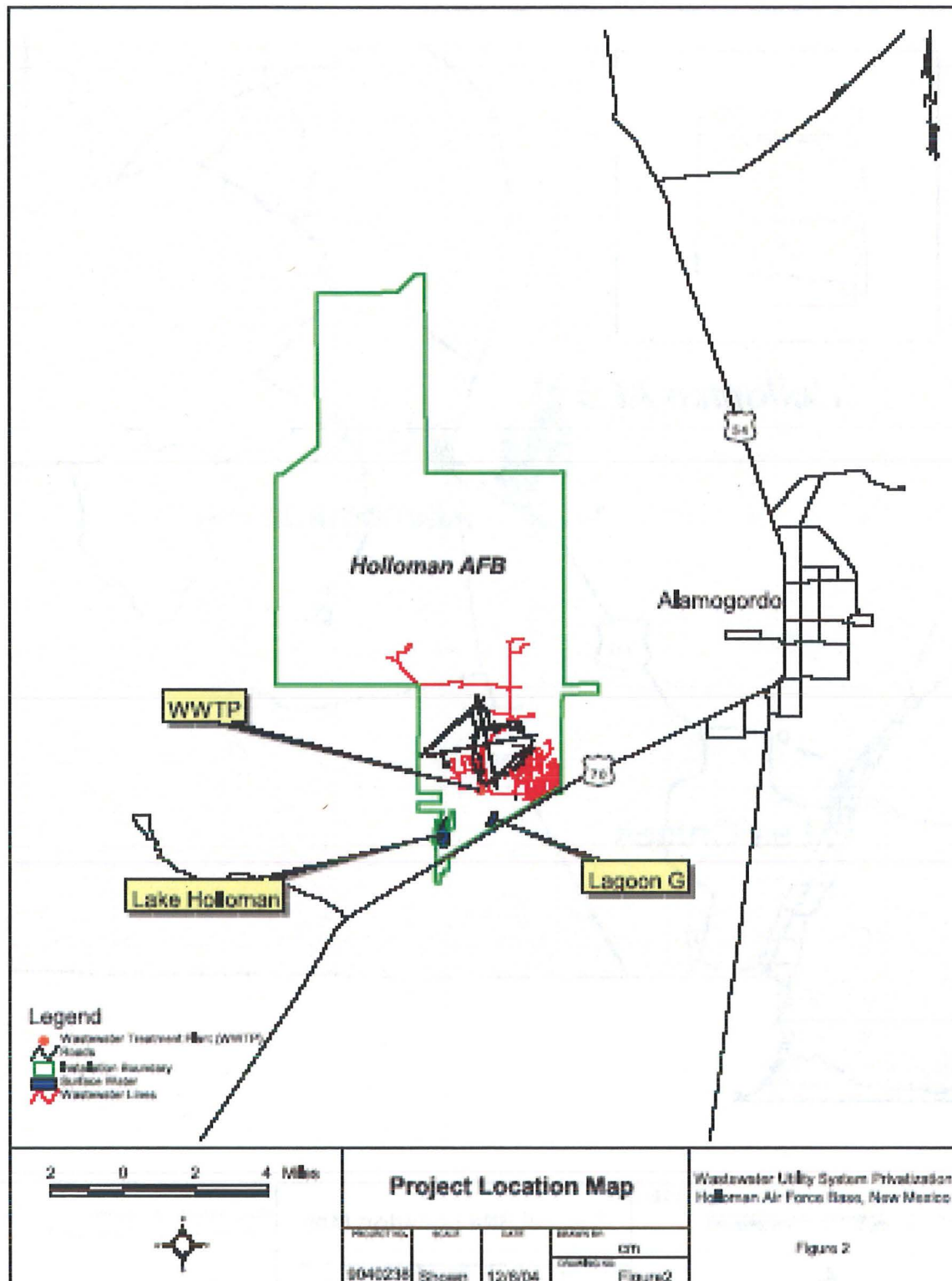
United States Fish and Wildlife Service, 1973. *The Endangered Species Act of 1973*.

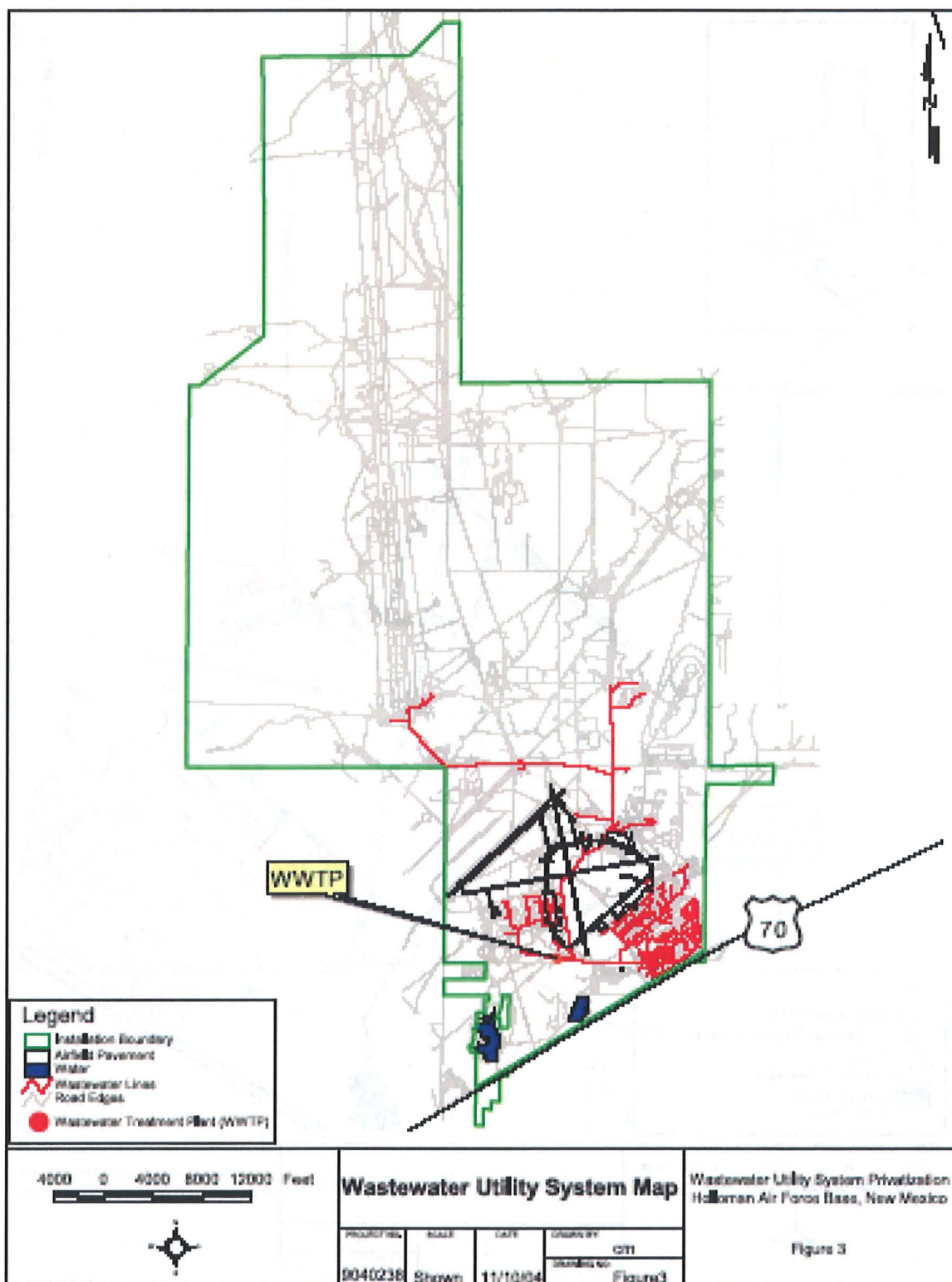
United States Memorandum, February 27, 1979. *An Archaeological Survey of HAFB Sewage Treatment Facilities*.

## **FIGURES**

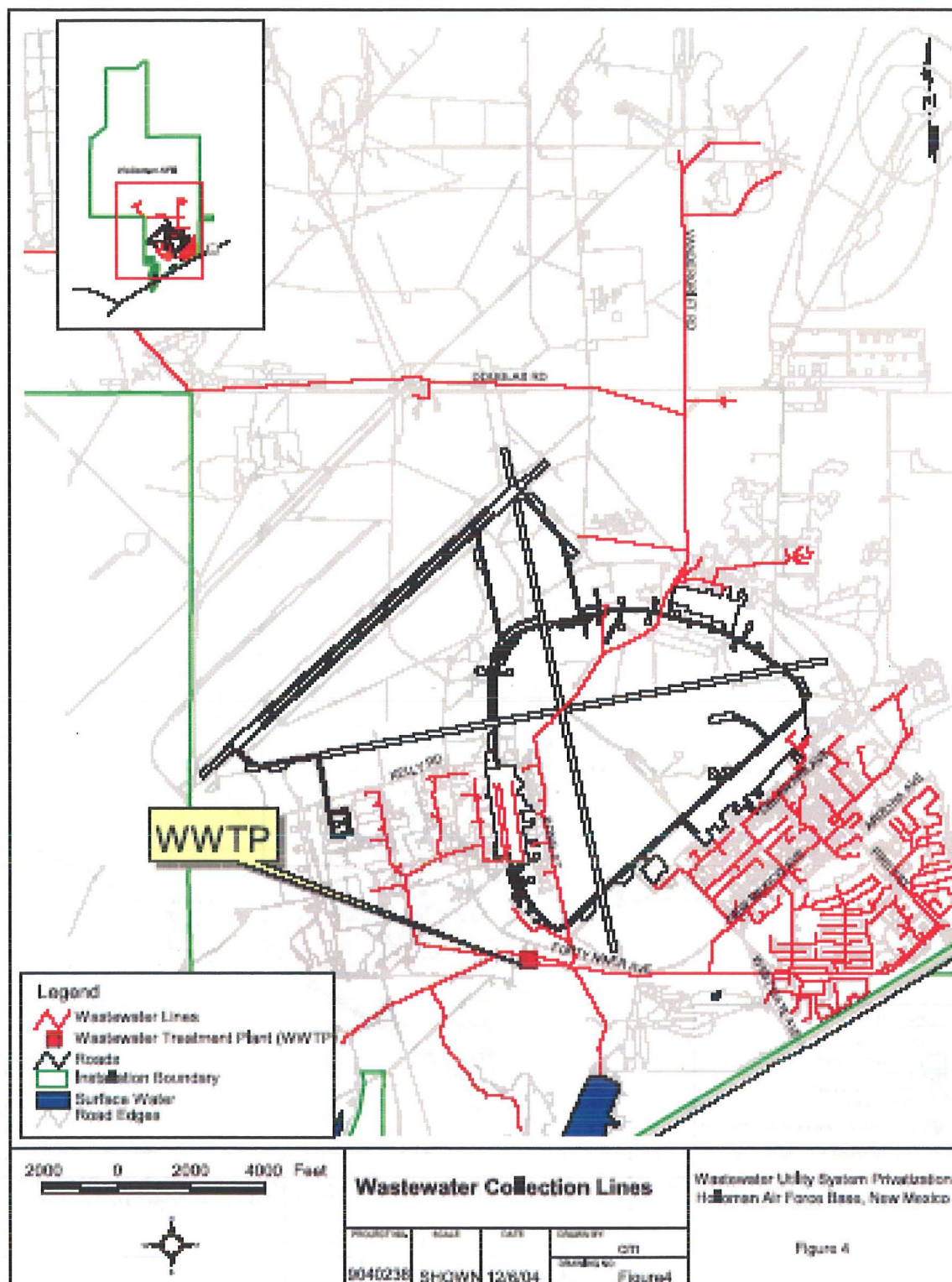
















## Appendix A

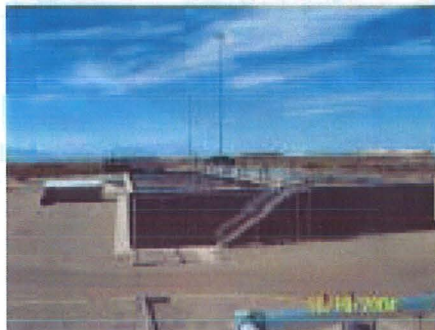
### Photographs



Photograph 1: View of the grit removal system at the wastewater treatment plant.



Photograph 2: View of the septage disposal basin at the wastewater treatment plant.



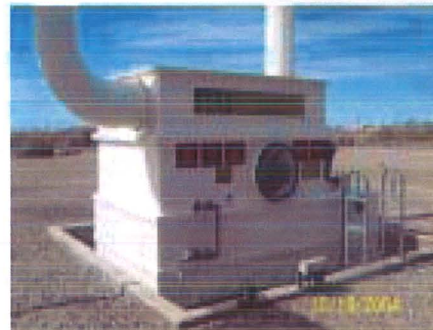
Photograph 3: View of the aeration basins at the wastewater treatment plant.



Photograph 4: View of the southern secondary clarifier at the wastewater treatment plant.

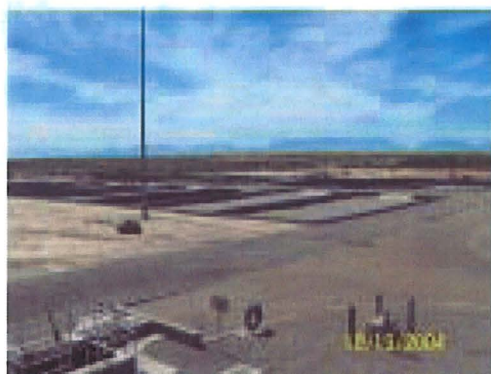


Photograph 5: View of the dechlorination basin at the wastewater treatment plant.

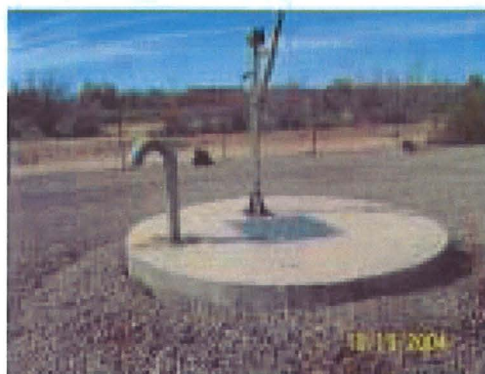


Photograph 6: View of the chlorine scrubber at the wastewater treatment plant.





Photograph 7: View of the sludge drying beds at the wastewater treatment plant.



Photograph 8: View of Lift Station 23, located at the wastewater treatment plant.



Photograph 9: View of a typical lift station (specifically, Lift Station 25) at HAFB.



Photograph 10: View of the splitter box located southeast of the wastewater treatment plant.



Photograph 11: View of the 6-inch forcemain outfall at Lagoon G.



Photograph 12: View of dense vegetation located on the northern portion of Lagoon G.



Photograph 13: View of the outfall area of the 24-inch gravity line at Lake Holloman.



Photograph 14: View of Lake Holloman, facing northwest.



Photograph 15: View of the recreational area at Lake Holloman, facing north.



Photograph 16: View of the dam/road dividing Lakes Holloman and Stinky, facing west.



Photograph 17: View of Lake Stinky, facing southwest.



Photograph 18: View of Lake Stinky and Highway 70, facing west.



## APPENDIX B

### SCOPING LETTER AND RECIPIENT LIST

MEMORANDUM FOR

«DIVISION»

«ORGAN»

«ADD\_1»

«ADD\_2»

«CITY», «ST» «ZIP»

FROM: 49 CES/CEV

550 Tabosa Avenue

Holloman AFB NM 88330

Subject: Proposed Privatization of the Wastewater Utility System Environmental  
Assessment

The United States Air Force at Holloman Air Force Base (AFB) is preparing an Environmental Assessment (EA) for the proposed privatization of the wastewater utility system.

The Air Force is proposing to sell the entire Holloman AFB wastewater collection and treatment system to a non-Air Force entity, granting real estate instruments as necessary to support the new owner of the system. The purpose of the action is to meet Congressional and Office of the Secretary of Defense (OSD) mandates regarding the privatization of non-combat military activities. The decision to proceed with the privatization process was made in September 2000. The decision whether to privatize or not is expected to be made on or before September 2003.

We are interested in any comments you may have that will help us identify areas of concern. We will send a copy of the public documents as soon as they are available.

Comments or concerns may be mailed to the address above or may be faxed to Mr. David Scruggs at (505) 372-5080. You may also respond via telephone to (505) 372-3931.

Thank you for your interest.

Sincerely,

A. DAVID BUDAK  
Deputy Base Civil Engineer



**ENVIRONMENTAL  
ASSESSMENT****WASTEWATER UTILITY SYSTEM PRIVATIZATION  
HOLLOMAN AIR FORCE BASE, NEW MEXICO**

Pat McCourt	City of Alamogordo, City Manager	1376 E. Ninth St.	Alamogordo, NM 88310
Ed Carr	Executive Director, Alamogordo Chamber of Commerce	1301 N. White Sands Boulevard	Alamogordo, NM 88310
Ruth Hooser	Otero County Administrator	1000 New York Avenue, Room 101	Alamogordo, NM 88310
Ned Farquhar	New Mexico Single Point of Contact	State Capitol Building, Suite 400	Santa Fe NM, 87501
Gedi Cibas	Environmental Impact Review Coordinator, NMED	1190 St. Francis Drive	Santa Fe, NM 87502
Lisa Kirkpatrick	New Mexico Department of Game and Fish	PO Box 25112	Santa Fe NM 87504
Bureau of Land Management	Las Cruces District Office	1800 Marquess St.	Las Cruces, NM 88005
Susan MacMullin	US Fish and Wildlife Service	2105 Osuna Road, NE	Albuquerque, NM 87113
Cliff Spencer	Park Superintendent, White Sands National Monument	P.O. Box 1086	Holloman AFB, NM 88330
Peter Bullock, NEPA Customer Support Division	Environment and Safety Directorate	Attn: WSM-ES- C	White Sands Missile Range, NM 88002-5000
Holloman Air Force Base	Environmental Flight	550 Tabosa Ave.	Holloman AFB, NM 88330

## APPENDIX C

### RESPONSES OF THE PUBLIC, AGENCIES, AND OTHER ORGANIZATIONS

ENVIRONMENTAL  
ASSESSMENT

WASTEWATER UTILITY SYSTEM PRIVATIZATION  
HOLLOMAN AIR FORCE BASE, NEW MEXICO



United States Department of the Interior

FISH AND WILDLIFE SERVICE  
New Mexico Ecological Services Field Office  
2105 Osuna NE  
Albuquerque, New Mexico 87113  
Phone: (505) 346-2525 Fax: (505) 346-2542

ED 405-1140  
CEV  
SMTS

February 7, 2005

Cons. # 2-22-05-1-189

A. David Budak, Deputy Base Civil Engineer  
Attention: David Scruggs  
U.S. Department of the Air Force  
49 CES/CD  
550 Tabosa Avenue  
Holloman AFB, New Mexico 88330

Dear Mr. Budak:

Thank you for your December 20, 2004, letter requesting information on threatened or endangered species or important wildlife habitats that could be affected by the proposed Holloman Air Force Base (Holloman AFB) Wastewater Utility System privatization project. The proposed project would meet Congressional and Office of the Secretary of Defense non-combat military activity privatization mandates. The project would be located on Holloman AFB in Otero County, New Mexico.

We have enclosed a current list of federally endangered, threatened, proposed, and candidate species, and species of concern that may be found in Otero County, New Mexico.<sup>1</sup> Under the Endangered Species Act, as amended (Act), it is the responsibility of the Federal action agency or its designated representative to determine if a proposed action "may affect" endangered, threatened, or proposed species, or designated critical habitat, and if so, to consult with us further. If your action area has suitable habitat for any of these species, we recommend that species-specific surveys be conducted during the flowering season for plants and at the appropriate time for wildlife to evaluate any possible project-related impacts. Please keep in mind that the scope of federally listed species compliance also includes any interrelated or interdependent project activities (e.g., equipment staging areas, offsite borrow material areas, or utility relocations) and any indirect or cumulative effects.

Candidates and species of concern have no legal protection under the Act and are included in this document for planning purposes only. We monitor the status of these species. If significant declines are detected, these species could potentially be listed as endangered or threatened.

<sup>1</sup> Additional information about these species is available on the internet at <http://nrmrplants.unm.edu>, <http://nrmhp.unm.edu/bisonm/bisonquery.php>, and <http://ifw2rs.fws.gov/endangeredspecies>.



A. David Budak, Deputy Base Civil Engineer

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Therefore, actions that may contribute to their decline should be avoided. We recommend that candidates and species of concern be included in your surveys.

Under Executive Orders 11988 and 11990, Federal agencies are required to minimize the destruction, loss, or degradation of wetlands and floodplains, and preserve and enhance their natural and beneficial values. We recommend you contact the U.S. Army Corps of Engineers for permitting requirements under section 404 of the Clean Water Act if your proposed action could impact floodplains or wetlands. These habitats should be conserved through avoidance, or mitigated to ensure no net loss of wetlands function and value.

The Migratory Bird Treaty Act (MBTA) prohibits the taking of migratory birds, nests, and eggs, except as permitted by the U.S. Fish and Wildlife Service. To minimize the likelihood of adverse impacts to all birds protected under the MBTA, we recommend construction activities occur outside the general migratory bird nesting season of March through August, or that areas proposed for construction during the nesting season be surveyed, and when occupied, avoided until nesting is complete.

Open structures such as wastewater lagoons, tanks, and evaporation ponds often provide injurious conditions to threatened or endangered species, migratory birds, or other wildlife. During flight, migratory birds do not distinguish between such artificial water bodies in these open structures and natural water bodies, and could be attracted to these artificial water bodies to drink, rest, and perhaps feed on the algae and invertebrates that may be associated with these wastewaters. Such artificial water bodies could serve as an "attractive nuisance" if measures are not taken to exclude migratory birds (and other wildlife) from access to injurious waters or conditions. These waters may often have elevated concentrations of salts and brine, trace elements, nutrients or fertilizers, heavy metals, organic chemicals, petroleum or solvent-derived residues, pesticide residues, antibiotics, veterinary chemicals, and human or animal pathogenic microorganisms which can pose a risk to the health of migratory birds and other wildlife.

Where necessary, we recommend open lagoons, ponds, and/or tanks that may be injurious be constructed with an appropriate exclusion methodology (e.g., nets, fences, enclosed tanks, etc.) to prevent migratory bird and other wildlife access to any wastewater or sludge that might contain an oil sheen, toxic chemicals, sediments, or otherwise harmful conditions. These comments are made with the intent to inform and intercede before any migratory bird deaths occur, since these birds constitute a legally protected resource. An "illegal take" of migratory birds can include the accidental poisoning or accumulation of harmful concentrations of contaminants, even if the contamination event was accidental or the perpetrator was unaware that his or her actions (or failure to take action) could ultimately prove to be harmful to migratory birds. If the operation of such structures as lagoons, ponds, and tanks, results in migratory bird deaths and the problem is not addressed, the operators may be held liable under the enforcement provisions of the MBTA. The Service would rather prevent problems which result from migratory bird access to contaminated or injurious waters, or which result in harm to endangered species from stored or discharged contaminants, than take enforcement actions, which are expensive and disruptive to

A. David Budak, Deputy Base Civil Engineer

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legitimate business and disposal operations. Facilities that are designed to safeguard migratory birds, and that incorporate preventative measures also tend to be protective of other wildlife which may reside at or visit the waste water disposal site. We also encourage the operator to solicit comments from the New Mexico Department of Game and Fish to assist in the protection of resident and visiting wildlife.

With regard to fish and wildlife resources, the EA should assess the impacts of the proposed project and its alternatives on species populations and their habitats, with an emphasis on wetlands, waters of the United States, and native fish, wildlife, and plants. The EA should also evaluate the direct and indirect impacts to ground and surface water resources associated with the proposed project.

We suggest you contact the New Mexico Department of Game and Fish, and the New Mexico Energy, Minerals, and Natural Resources Department, Forestry Division for information regarding fish, wildlife, and plants of State concern.

Thank you for your concern for endangered and threatened species and New Mexico's wildlife habitats. We look forward to reviewing the draft Environmental Assessment when it is available.

In future correspondence regarding this project, please refer to consultation # 2-22-05-L-189. If you have any questions about the information in this letter, please contact John Branstetter at the letterhead address or at (505) 346-2525, ext. 4753.

Sincerely,



Susan MacMullin  
Field Supervisor

Enclosure

cc: (w/o enc)

Director, New Mexico Department of Game and Fish, Santa Fe, New Mexico

Director, New Mexico Energy, Minerals, and Natural Resources Department, Forestry Division,  
Santa Fe, New Mexico



FEDERAL ENDANGERED, THREATENED,  
PROPOSED, AND CANDIDATE SPECIES  
AND SPECIES OF CONCERN IN NEW MEXICO  
Consultation Number 2-22-05-1-189  
February 7, 2005

Otero County

ENDANGERED

Black-footed ferret (*Mustela nigripes*)\*\*  
Interior least tern (*Sterna antillarum*)  
Northern aplomado falcon (*Falco femoralis septentrionalis*)  
Southwestern willow flycatcher (*Eupidonax traillii extimus*)  
Kuenzler hedgehog cactus (*Echinocereus fendleri* var. *kuenzleri*)  
Sacramento prickly poppy (*Argemone pleiacantha* ssp. *pinnatifida*)  
Todsens pennyroyal (*Hedeoma todsenii*)

THREATENED

Bald eagle (*Haliaeetus leucocephalus*)  
Mexican spotted owl (*Strix occidentalis lucida*) with critical habitat  
Sacramento Mountains thistle (*Cirsium vinaceum*)

SPECIES OF CONCERN

Black-tailed prairie dog (*Cynomys ludovicianus*)  
Desert pocket gopher (*Geomys bursarius arizonae*)  
Guadalupe southern pocket gopher (*Thomomys umbrinus guadalupensis*)  
New Mexican meadow jumping mouse (*Zapus hudsonius luteus*)  
Penasco (Least) chipmunk, (*Tamias minimus atristriatus*)  
Townsend's big-eared bat (*Corynorhinus townsendii*)  
White Sands woodrat (*Neotoma micropus leucophaga*)  
American peregrine falcon (*Falco peregrinus anatum*)  
Arctic peregrine falcon (*Falco peregrinus tundrius*)  
Baird's sparrow (*Ammodramus bairdii*)  
Bell's vireo (*Vireo bellii*)  
Black tern (*Chlidonias niger*)  
Mountain plover (*Charadrius montanus*)  
Northern goshawk (*Accipiter gentilis*)  
Western burrowing owl (*Athene cunicularia hypuga*)  
Yellow-billed cuckoo (*Coccyus americanus*)  
Rio Grande cutthroat trout (*Oncorhynchus clarki virginalis*)  
White Sands pupfish (*Cyprinodon tularosa*)  
Sacramento mountain salamander (*Aneides hardii*)  
Sacramento Mountains checkerspot butterfly (*Euphydryas anicia cloudercrofti*)  
Sacramento Mountains silverspot butterfly (*Speyeria atlantis capitaneus*)



SPECIES OF CONCERN continued:

Sacramento Mountains blue butterfly (*Icaricia icarioides*) new subspecies  
 Alamo beard tongue (*Penstemon alamosensis*)  
 Desert night-blooming cereus (*Cylindropuntia greggii* var. *greggii*)  
 Goodding's onion (*Allium gooddingii*)  
 Guadalupe rabbitbrush (*Chrysothamnus nauseosus* var. *texensis*)  
 Gypsum scalebroom (*Lepidospartum burgesii*)  
 Sierra Blanca cliff daisy (*Chaetopappa elegans*)  
 Villard's pincushion cactus (*Escobaria villardii*)  
 Wright's marsh thistle (*Cirsium wrightii*)

Index

- Endangered = Any species which is in danger of extinction throughout all or a significant portion of its range.
- Threatened = Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.
- Candidate = Candidate Species (taxa for which the Service has sufficient information to propose that they be added to list of endangered and threatened species, but the listing action has been precluded by other higher priority listing activities).
- Species of Concern = Taxa for which further biological research and field study are needed to resolve their conservation status OR are considered sensitive, rare, or declining on lists maintained by Natural Heritage Programs, State wildlife agencies, other Federal agencies, or professional/academic scientific societies. Species of Concern are included for planning purposes only.
- \*\* = Survey should be conducted if project involves impacts to prairie dog towns or complexes of 200-acres or more for the Gunnison's prairie dog (*Cynomys gunnisoni*) and/or 80-acres or more for any subspecies of Black-tailed prairie dog (*Cynomys ludovicianus*). A complex consists of two or more neighboring prairie dog towns within 4.3 miles (7 kilometers) of each other.

**ENVIRONMENTAL  
ASSESSMENT**

**WASTEWATER UTILITY SYSTEM PRIVATIZATION  
HOLLOMAN AIR FORCE BASE, NEW MEXICO**



IN REPLY REFER TO:  
L7619

January 20, 2005

**United States Department of the Interior**

**NATIONAL PARK SERVICE  
White Sands National Monument  
P.O. Box 1086  
Holloman AFB, NM 88330**



*CS AB 25 Jan 05*  
*CEV*

A. David Budak  
Deputy Base Civil Engineer  
49 CES/CD  
550 Tabosa Avenue  
Holloman AFB, NM 88330

Dear Mr. Budak:

Thank you for your December 20, 2004, memorandum regarding the preparation of an Environmental Assessment for the proposed privatization of the Holloman Air Force Base wastewater system. We have no comments regarding areas of concern, but wish to remain on your mailing list for future documents regarding this project.

Should you have any questions, feel free to contact me at the address above or by phone at (505) 679- 2599, extension 210.

Sincerely,

Cliff Spencer  
Superintendent



## APPENDIX D

### PUBLIC NOTICE

Notice of Availability  
49<sup>th</sup> Fighter Wing WWTP Privatization EA  
Holloman Air Force Base, New Mexico  
September 12, 2005

The Air Force is proposing to sell the entire HAFB wastewater collection and treatment system to a non-Air Force entity, granting real estate instruments as necessary to support the new owner of the system. The system includes all equipment, fixtures, right-of-way, and other improvements utilized in connection with the wastewater treatment system. The real property upon, under, or around the utility system would not be included. The acquiring entity will be required to provide all necessary labor, management, supervision, permits, equipment, supplies, materials, transportation, and any other incidental services for the complete ownership, operation, maintenance, repair, upgrades, and improvements to the wastewater treatment system.

Pursuant to The National Environmental Policy Act of 1969, Holloman has prepared a Draft Environmental Assessment and Finding of No Significant Impact. These documents analyze the potential environmental impacts of undertaking this proposed action and the No Action Alternative.

Copies have been placed in the Alamogordo Public Library at 920 Oregon Avenue in Alamogordo, the Holloman AFB Library at 596 Fourth Street, and Thomas Branigan Memorial Library at 200 East Picacho Ave in Las Cruces.

Interested groups and individuals may contact the 49<sup>th</sup> Fighter Wing Public Affairs Office at (505) 572-5406 for more information. Written comments should be submitted by October 24, 2005 to 49 FW/PA, Attn: WWTP Privatization EA, 490 1<sup>st</sup> St Room 280, Holloman AFB, NM 88330-8287.